

# KBP-2000M 2MW 풍력발전기 물리설계

## PHYSICAL DESIGN OF THE 2MW GENERATOR FOR KBP-2000M

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**Abstract** : Pohang Wind Energy Research Center (PoWER-C) has developed a direct drive 750 kW permanent magnet synchronous generator in 2004 [1]. The 2 MW generator following the 750 kW is a two-stage geared variable speed PM machine. Direct drives are reliable but will be so large that it is too expensive in the multi-megawatt class. Most direct drive generators of multi-megawatt would suffer from the ground transportation in Korea. The advantages of the geared variable speed synchronous generator are cheap in generator with better efficiency, and compact structure relatively. But also this system has the expensive electrical converter. It is important that reactive power can be controlled. In this article, a preliminary design for the geared PM synchronous generator is described. The German company Aerodyn takes charge of the mechanical design for this 2 MW generator. This project is produced with support of the Korean government.

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