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LG Electronics has furnished with full GHP lineup - To launch the world's highest efficiency GHP¹ of the 30HP class

LG Electronics (www.lge.co.kr) has launched a new 30HP GHP of the world's highest efficiency, and thereby strengthens the domestic heat pump market. LG Electronics has launched the 30HP 'GHP Super 2' which is new GHP. The 30HP class has 85kW of cooling capacity and 95kW of heating capacity, which is the world's largest level of capacity. LG Electronics is the unique company among domestic manufacturers to produce and develop products with its own technology.

The new model called 30HP 'GHP Super 2' can cover 12 classrooms of 66m² at the same time, which is sufficient even if there is only one new product. Up to 47 indoor units can be connected with one outdoor unit. Last year LG Electronics has launched 3 Models, 16HP, 20HP, 25HP at the same time as the same brand name of 'GHP Super 2'. LG Electronics can produce 4 capacity levels, 16HP, 20HP, 25HP, and 30HP with their own technology. As 'GHP Super 2' is a product of a high-efficiency GHP using the engine to the gas as an energy source, it dramatically improves by using a high-performance car engine. This new 30HP product that has efficiency 1.30 at Cooling and 1.51 at heating has achieved the most efficient product in world-wide.

This new product while enhancing the performance of the product to the most efficient product, has achieved the world's lowest noise base on GHP standards of 60dB like existing products. 'GHP Super 2' was selected first to '2014, the 10 Mechanical Technology' last year in October from Korea Association of Machinery and Technology Societies among gas air conditioner industry and recognized as a technology. Then in November, this received also first the 'Green Technology' certification from the Ministry of Trade, Industry and Energy among gas air conditioner industry.

Lee Jae-Sung, the LG Electronics Air Conditioning Systems department head stressed that "We will lead the market by continuous technology development, showing the world's highest level of capacity, most efficient of GHP".

¹ Gas Driven Heat Pump



Samyang Eco-Energy, receives 'Green Technology' Certification by 'Tandem Heat Pump design technology using turbo heat pump'

Seawater air conditioning technology was recognized by Green-technology to improve installing existing heat pump, and utilizing the high efficiency large turbo pump. Samyang Eco-energy (CEO, Yunho Kim), new energy specialist company, noticed that they received Certification of 'Green Technology' by tandem heat pump design technology using turbo heat pump.

Tandem heat pump technology, when connected in tandem the heat pump, heat pump configurations and operational techniques for efficiently utilized for cooling and heating by using the deep sea water and coastal bottom layer water as a heat source, it was decided to authenticate by applying the finding that further improved performance when operating in the parallel system.

Tandem heat pump technology that Ministry of Maritime Affairs and Fisheries has promoted as part of the research and development business of "The development of energy utilization technology of deep ocean water" which has been supported from 2010 to 2014, has been developed to utilize seawater air-conditioning and seawater temperature difference power generation plant. In this project Marine Science and Technology Institute is project manager, Korea Institute of Energy Research, and more than 10 companies have participated.

500RT turbo pump of the three-stage compression system applied to the tandem configuration, which has been developed jointly by Marine Science and Technology Institute and Samyang eco-energy can provide the outlet water temperature to 60 °C, the performance is approximately 20% higher than the geothermal heat pump. This technology was found not only improves the efficiency by a turbo pump in the process of cooling and heating using renewable energy but also have improved performance by 5% or more by the configuration of the tandem system.

Official of Samyang eco-energy noticed "District heating and cooling with the turbo heat pump has already been used in such as Europe and Japan, and we will provide district heat and cooling for small cities, big buildings, and hotels in coastal areas with this certification of green technology". In addition he said "This technology can be expected to contribute to widespread activation of penetration in ocean energy as renewable energy, and to reduce carbon emissions of more than 40 % compared to existing fossil fuel".

