High MegaWatt Drives for HVAC

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UNITED TECHNOLOGIES
HVAC UNITS POWER RANGE

2012 units sold in US calculated from AHRI data

http://www.ari.org/monthly+shipments.aspx
HIGH POWER HVAC UNITS

Options for Low voltage or Medium voltage

1. Addition of line frequency transformer (size and weight)
2. Low voltage high current cabling
3. Leverage low voltage market

1. Medium voltage switchgear and protection
2. Passive front end would require 18-24P rectifier to meet harmonic limits
3. Medium voltage cables would be lower weight

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WIDE BAND GAP DEVICES

Multiple opportunities for high frequency devices

1. Weight reduction with electronic transformers
2. High efficiency low voltage motor drives

1. Input filter size reduction
2. Increase in compressor speed

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