

Submitted by:

William C. Wirz  
Product Manager  
Separable Gas Compressors

Dresser-Rand Company  
100 Chemung St  
Painted Post, NY 14870  
Phone (607) 937-2011  
Fax (607) 937-2905

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High Speed Separable Compressors – An Alternative for Slow Speed Integral-Engine Compressors for Natural Gas Transmission and Gas Storage

**-ABSTRACT-**

Natural Gas Transmission and Gas Storage applications have been typically addressed by the installation and use of slow speed Integral – Engine Compressors. These large machines are located throughout the world and are the backbone of the natural gas industry. They are efficient in terms of fuel consumption, through turndown and capacity control techniques. However, they have a very high installation cost, typically requiring large foundations. Since this machine is also an “engine”, these machines are regulated environmentally for exhaust emissions output. Integral-Engine Manufacturers are no longer producing new machines of this type, so an alternative to this type of machine needed to be developed.

This paper will review the design work that has been accomplished by Dresser-Rand Co. to develop and successfully apply modern High Speed Compressors with absorbed power up to 8MW as an alternative to the slow speed Integral-Engine Compressor. This paper will address development of the compressor, reliability, installation cost, and capacity control techniques.