



White Paper

Hybrid Air Compression: Blower-Compressor Combination does the Trick

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Until recently, the oil-free compression of air to pressures of 1.0 to 1.5 bar was somewhat challenging. Rotary lobe blowers for this pressure range proved to be unreliable and using screw compressors was often too costly. A new hybrid air compressions system introduced by Aerzener combines the advantages of both systems.

In addition to three existing screw compressors for central air conveying station at the Rohrdorf Cement Plant in Germany, a new Aerzen Delta Hybrid rotary lobe compressor was installed in 2008. This unit delivers $43.9 \text{ m}^3 / \text{min}$ (1550 cfm) of air at a pressure of 1.5 bar g (22 psig). This unique series combines the advantages of a rotary screw compressor and of a positive displacement blower in a ground-breaking 'blower-compressor concept'.

Significant compromises were previously necessary to exceed pressures of over 1 bar (15 psig) so this new symbiosis is the ideal conveying air producer. Once.

installed, the new Delta Hybrid produced all the air and pressure needed for this coal conveying line and the screw compressor could be de-commissioned.