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(12) **United States Patent**  
**Dünn**

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(54) **DRY OPERATING SCREW-TYPE  
COMPRESSOR WITH PNEUMATICALLY  
CONTROLLED AIR RELIEF VALVE**

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(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 303 days.

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See application file for complete search history.

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(57) **ABSTRACT**

A screw-type compressor having a motor driven and dry operating compressor unit. A butterfly valve is disposed in an intake line connected to the suction side of the compressor unit. An adjustment cylinder mechanically shifts the butterfly valve. A pressure line is connected to the pressure side of the compressor unit and, via the interposition of a check valve, is connected to a compressed air system. The pressure line is connected to a pneumatically controlled air relief valve via an air relief line for relief of pressure during idling of the compressor unit. At least during idling, the air relief valve is adapted to be acted upon by the pressure that is effective on the pressure side of the compressor unit.

**15 Claims, 6 Drawing Sheets**

