

Title (en)
MULTI-STAGE TURBO COMPRESSOR

Title (de)
MEHRSTUFIGER TURBOVERDICHTER

Title (fr)
TURBOCOMPRESSEUR À PLUSIEURS ÉTAGES

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Application
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Abstract (en)
[origin: WO2010118977A1] The invention relates to a multi-stage turbo compressor (TC) which has at least one rotor (R) and a housing (C) and compresses a process gas (PG) from an inlet pressure (p1) at the inlet of a first stage (ST1) to an end pressure (p7) at the outlet (EX) of a last stage (ST6), wherein at least the first stage (ST1) and the last stage (ST6) are each allocated at least one gas seal (DGS1 - DGS6) that seals the passage of a rotor shaft through a wall of the housing (C) or seals the housing (C) with respect to a stage inlet pressure or stage end pressure, wherein the gas seals (DGS1 - DGS6) are connected to at least one sealing gas line (SGL1 - SGL6), by means of which they are supplied with sealing gas (SG). In order to create improved sealing of multi-stage turbo compressors that prevents gas seals from being subjected to unfiltered process gas, according to the invention at least one pressure chamber (PR) on the pressure side of the gas seal (DGS1 - DGS6) of the last stage (ST6), which provides sealing against the end pressure of the environment, is connected to at least one relief line (RL) ending in a pressure sink.

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