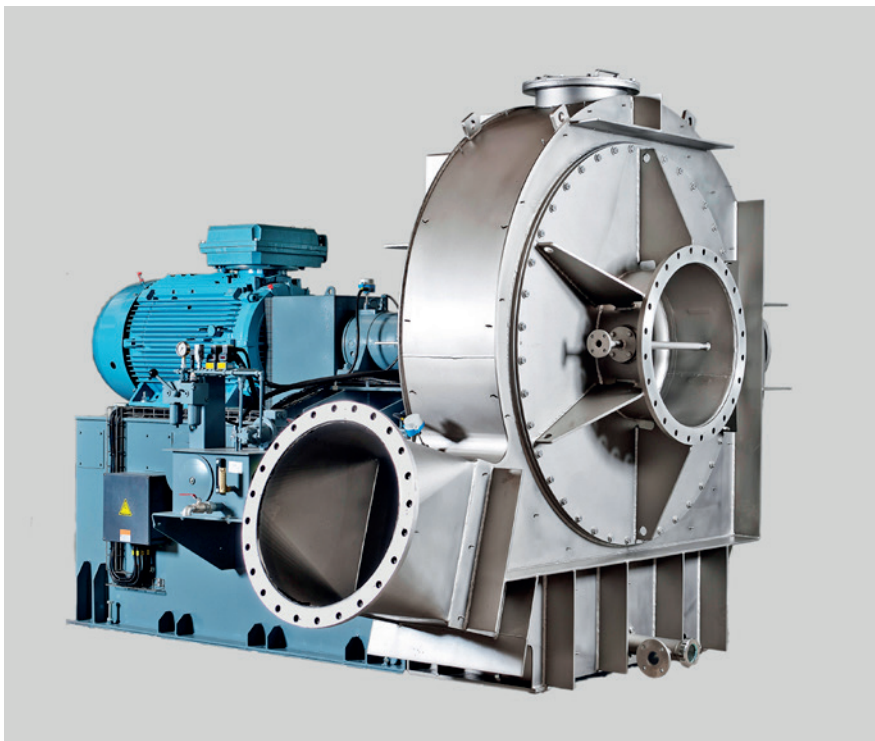


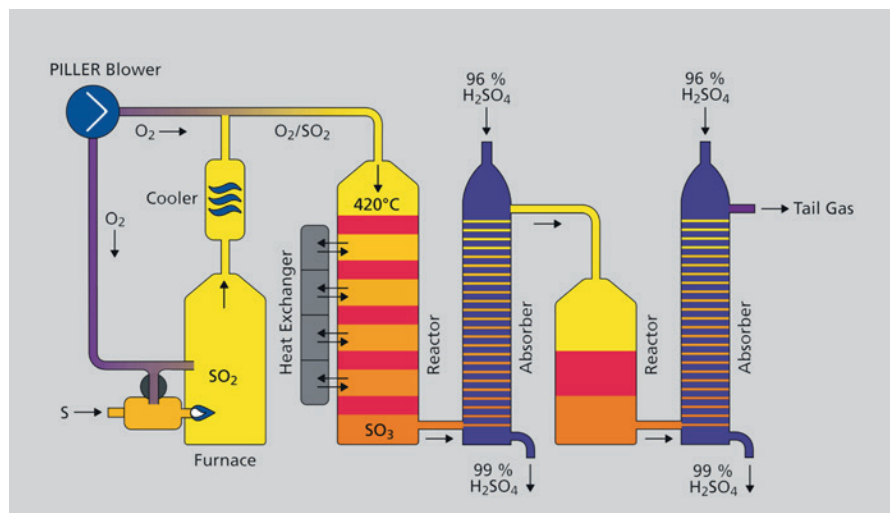
PILLER BLOWERS IN SULFURIC ACID PRODUCTION



PILLER's unique blowers combine high efficiency with high performance. The consistent design starting from the casing over the impeller and shaft seal system to the patented bearings makes possible to use PILLER blowers in almost any applications where high pressure, high temperature or a combination of both is needed. Also corrosive products in the gas stream, combined with water are challenges that PILLER blowers are able to deal with.

High pressure blower

As a byproduct of metal ore mining like FeS_2 , Cu_2S or $CuFeS_2$ the sulfur is separated and extracted. Sulfur dioxide SO_2 is made by roasting the sulfide ores and oxygen (in the form of air) which combine to form sulfur trioxide in the presence of a catalyst. The PILLER blower provides the oxygen (air) for the process.



Schematic of the double absorption contact process

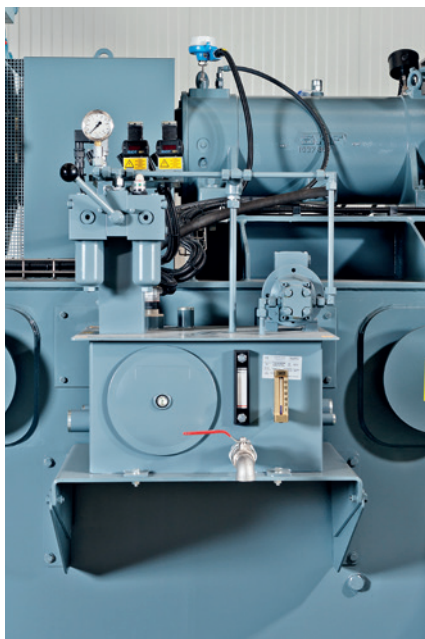
The PILLER blowers are replacing turbo compressors in these applications. Smaller investment, better efficiency, wide range of operation and lower maintenance are the main advantages, going along with higher reliability and easier operation.

PILLER pays great attention to details like shaft seal and bearings in order to give the blower the highest reliability possible.

SHAFT SEAL

The high quality floating ring type shaft sealing, designed by Eagle Burgmann, ensures the tightness of the blowers, where the shaft enters the blower casing. The seal has a horizontal split which allows easy assembly and maintenance without dismantling the impeller.

The shaft sealing, like our blowers, can be customized according to the process conditions. The number of rings, buffer gas connection, vacuum suction, special alloys as well as other properties can be selected.



Bearing lubeoil system



Shaft seal

PILLER-Project in copper plant:

Process	Sulfuric Acid production with Double Contact Double Absorption Process
Location	Russia
Gas-composition	SO ₂ max. 10%
Radial Fan	50772 KKXGAE 80800 GL 90

Technical data:

Mass flow	123300 kg/h
Inlet temperature	45°C
Static-differential pressure	37.69 kPa
Efficiency	82 %
Shaft speed	2975 RPM
Shaft power	1579 kW
Impeller Tip Speed	250 m/s
Material of construction casing 316 SS, Impeller 2205 Duplex	

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