

Title (en)
MULTI-STAGE CENTRIFUGAL COMPRESSOR AND AIR CONDITIONING UNIT

Title (de)
MEHRSTUFIGER ZENTRIFUGALVERDICHTER UND KLIMAAANLAGE

Title (fr)
COMPRESSEUR CENTRIFUGE MULTIÉTAGE ET UNITÉ DE CLIMATISATION

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EP 3040559 A1 20160706 (EN)

Application
EP 14839681 A 20140814

Priority
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Abstract (en)
A multi-stage centrifugal compressor and an air conditioning unit are disclosed. The multi-stage centrifugal compressor comprises a power portion and an impeller portion. The power portion comprises a motor (6), a shaft of the motor comprises a first end and a second end. The impeller portion comprises N impellers, wherein N is equal to or more than 2 and less than 10. When N is an even, the number of the impellers on the first end of the shaft is equal to that of the impellers on the second end of the shaft. When N is an odd, the number of the impellers on the first end of the shaft is one more than that of the impellers on the second end of the shaft. The first stage impeller farthest away from the motor (6) is arranged at the first end of the shaft; other impellers at the first end of the shaft are arranged in an ascending order. The Nth stage impeller nearest to the motor (6) is arranged at the second end of the shaft; other impellers at the second end of the shaft are arranged in a descending order. A gas outlet of the impellers arranged at the first end of the shaft communicates with a gas inlet of the impellers arranged at the second end of the shaft through a connection pipeline, so that the pressure ratio and the energy efficiency are improved.

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Cited by
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