

Title (en)  
SCREW COMPRESSOR AND AIR CONDITIONING UNIT

Title (de)  
SPIRALVERDICHTER UND KLIMATISIERUNGSEINHEIT

Title (fr)  
COMPRESSEUR À VIS ET UNITÉ DE CLIMATISATION

Publication  
**EP 3722609 A4 20201125 (EN)**

Application  
**EP 18909109 A 20181212**

Priority  
• CN 201810179519 A 20180305  
• CN 2018120570 W 20181212

Abstract (en)  
[origin: EP3722609A1] The present disclosure discloses a screw compressor and an air-conditioning unit, and relates to the field of compressors for improving the performance of screw compressors. The screw compressor comprises a first pressure level rotor assembly, a second pressure level rotor assembly and a body. The first pressure level rotor assembly comprises a first pressure level male rotor and a first pressure level female rotor that mesh with each other; the second pressure level rotor assembly comprises a second pressure level male rotor and a second pressure level female rotor that mesh with each other; and the first pressure level rotor assembly and the second pressure level rotor assembly are arranged in the body. Wherein, the first pressure level rotor assembly and the second pressure level rotor assembly are configured to enable an axial force received by the first pressure level rotor assembly and exerted by a compressed gas in the first pressure level rotor assembly opposite to an axial force received by the second pressure level rotor assembly and exerted by a compressed gas therein. In the above-described technical solution, the force received during the operational process of the screw compressor is more balanced, and the operation of the screw compressor has a higher reliability.

IPC 8 full level  
**F04C 18/16** (2006.01); **F01C 21/02** (2006.01); **F04C 23/00** (2006.01); **F04C 29/00** (2006.01)

CPC (source: CN EP US)  
**F01C 21/02** (2013.01 - EP); **F04C 18/16** (2013.01 - CN EP US); **F04C 23/001** (2013.01 - CN EP); **F04C 29/0021** (2013.01 - CN EP US); **F04C 29/0085** (2013.01 - EP); **F04C 2240/30** (2013.01 - US); **F04C 2240/40** (2013.01 - EP US); **F04C 2240/50** (2013.01 - US); **F04C 2250/20** (2013.01 - US)

Citation (search report)  
• [X1] WO 2018024201 A1 20180208 - JOHNSON CONTROLS AIR CONDITIONING AND REFRIGERATION WUXI CO LTD [CN], et al  
• [XAI] JP S61294184 A 19861224 - KOBE STEEL LTD  
• [X1] CN 1793654 A 20060628 - UNIV XI AN JIAOTONG [CN]  
• See also references of WO 2019169922A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3722609 A1 20201014; EP 3722609 A4 20201125; EP 3722609 B1 20230628**; CN 108167186 A 20180615; CN 108167186 B 20240712; US 2020408210 A1 20201231; WO 2019169922 A1 20190912

DOCDB simple family (application)  
**EP 18909109 A 20181212**; CN 201810179519 A 20180305; CN 2018120570 W 20181212; US 201816969952 A 20181212