

Title (en)  
VACUUM PUMP, FIXED BLADE, AND SPACER

Title (de)  
VAKUUMPUMPE, FESTSTEHENDE KLINGE UND ABSTANDSHALTER

Title (fr)  
POMPE À VIDE, PALE FIXE, ET ÉLÉMENT D'ESPACEMENT

Publication  
**EP 4202227 A1 20230628 (EN)**

Application  
**EP 21858144 A 20210730**

Priority  
• JP 2020140495 A 20200821  
• JP 2021028253 W 20210730

Abstract (en)  
A vacuum pump with enhanced exhaustion performance achieved by innovating stator blades (inner and outer rims) and spacers installed in the vacuum pump is provided. In the vacuum pump in which the rotor blade in one stage has an outer diameter that is smaller at an outlet port side, or the rotor blade in one stage has an inner diameter that is larger at an outlet port side, at least one of an outer circumference portion or an inner circumference portion of the stator blade that is located immediately above the rotor blade having a smaller outer diameter or immediately above the rotor blade having a larger inner diameter has a tapered surface sloping down to an outlet port side. By providing the tapered surface, entering molecules are reflected at a right angle, sent toward an inner circumference side, and hit by the rotor blade in the upper stage. The molecules are thus sent to a next exhaustion stage.

IPC 8 full level  
**F04D 19/04** (2006.01)

CPC (source: EP IL KR US)  
**F04D 19/04** (2013.01 - IL KR US); **F04D 19/042** (2013.01 - EP US); **F04D 29/26** (2013.01 - US); **F04D 29/403** (2013.01 - US);  
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BA ME

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