

Title (en)  
REFRIGERANT COMPRESSOR AND REFRIGERATION APPARATUS USING SAME

Title (de)  
KÄLTEMITTELVERDICHTER UND KÜHLVORRICHTUNG MIT VERWENDUNG DAVON

Title (fr)  
COMPRESSEUR FRIGORIFIQUE ET APPAREIL FRIGORIFIQUE L'UTILISANT

Publication  
**EP 3879101 A1 20210915 (EN)**

Application  
**EP 19882174 A 20191105**

Priority  
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• JP 2019043312 W 20191105

Abstract (en)  
In a refrigerant compressor including a sealed container in which refrigerating machine oil is stored, a shaft part that includes a main shaft and an eccentric shaft, or a bearing part that includes a main bearing and an eccentric bearing, is provided with tapered portions, the tapered portions being respectively formed on one end side and another end side of the shaft part or the bearing part in an axial direction of the bearing part such that a diameter of the shaft part or the bearing part changes from an outer side toward a central side in a longitudinal direction of a crankshaft, each tapered portion allowing the shaft part and the bearing part to come into line contact with each other in a state where an axis of the shaft part is tilted relative to an axis of the bearing part. A ratio  $C/D$ , which is a ratio of a clearance  $C$  between the shaft part and the bearing part to a diameter  $D$  of the shaft part, is set to a value within a range of not less than  $4.0 \times 10^{-4}$  and not greater than  $3.0 \times 10^{-3}$ . A taper depth  $d_B$  of each tapered portion is set to a value not less than  $2.0 \times 10^{-3}$  mm. In a combination of the shaft part and the bearing part corresponding thereto, a ratio  $G/D$ , which is a ratio of a maximum gap  $G$  to the diameter  $D$  of the shaft part, is set to a value not greater than  $4.0 \times 10^{-3}$ . The maximum gap  $G$  is a sum of the clearance  $C$  and a total value of the taper depths  $d_B$ .

IPC 8 full level  
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CPC (source: EP US)  
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