

Title (en)  
CRANKSHAFT-TYPE VACUUM AIR PUMP AND GLASS-WIPING APPARATUS THEREOF

Title (de)  
KURBELWELLENSVAKUUMLUFTPUMPE UND GLASWISCHVORRICHTUNG DAVON

Title (fr)  
POMPE À AIR ASPIRANTE À VILEBREQUIN, ET APPAREIL ESSUIE-VITRE CORRESPONDANT

Publication  
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Application  
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Abstract (en)  
A crankshaft-type vacuum air pump comprising a drive motor (1), an air pump main body (2), and piston air pump components (3) arranged on the air pump main body (2). A crankshaft unit is arranged within the air pump main body (2). The top of the crankshaft unit is connected to the air pump main body (2) via an upper eccentric wheel (4), while the end is connected to the drive motor (1) via a lower eccentric wheel (5). The drive motor (1) outputs power to rotate the crankshaft unit. The crankshaft unit is connected to the piston air pump components (3) and drives the piston air pump components into motion, thus completing air intake and air discharge of the piston air pump components (3). The air pump is structurally simple and compact, the crankshaft per se is centrosymmetric, and one or more crankshaft units are made to serve as a rotary shaft, where the overall center of gravity during rotation is always located at the center of rotation and no vibration is caused by a centrifugal force. The rotary shaft is subjected to the force of piston rods on two sides that are always symmetric relative to the center of rotation, thus the rotary shaft is subjected to a radial force that is basically zero, the problem of vibration caused by unbalanced stress during rotation is greatly reduced, and a stable working state is allowed.

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