

Title (en)  
Radial wheel

Title (de)  
Radiallauftrad

Title (fr)  
Roue radiale

Publication  
**EP 0616131 B1 19961120 (DE)**

Application  
**EP 94100758 A 19940120**

Priority  
DE 9303711 U 19930313

Abstract (en)  
[origin: EP0616131A1] In the case of conventional radial wheels, the outside diameter of the blade ring between hub disc and cover disc is constant. The problem here is that the flow rate decreases greatly in the vicinity of the cover disc. As a result, efficiency and power density of the wheel are impaired. Wheels are also already known, in the case of which the diameter of the blade ring increases from the hub disc to the cover disc by about 10.5 to 35 %. According to calculations of the inventor, undesired shear flows here, involving considerable losses, can be avoided only by twisting the blades. For the manufacture of twisted blades, complicated special tools are required, so that a single-piece or small-series production is not economical as a rule. The new wheel has blades (3) which are simple to manufacture and are plane or cylindrically curved. An increase in the efficiency and power density is achieved in that the diameter of the blade ring on the cover disc (2) is 1 to 6 % greater than on the hub disc (1). The wheel is particularly suitable for single-piece or small-series production. <IMAGE>

IPC 1-7  
**F04D 29/28; F04D 29/30**

IPC 8 full level  
**F04D 29/28** (2006.01); **F04D 29/30** (2006.01)

CPC (source: EP)  
**F04D 29/281** (2013.01)

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