

ELLIPTICAL VORTEX WALL FOR TRANSVERSE FANS
ABSTRACT OF THE DISCLOSURE

Changing the tip (116-1) of the vortex wall (116) to an ellipse can increase flow performance by having the short side of the ellipse define a portion of the converging diverging section while quieter operation can be achieved by having the long side of the ellipse define a portion of the converging diverging section with no other changes. A combination of increased flow and reduced noise can be achieved by combining changing the clearance between the vortex wall and the impeller with an elliptical surface as well as by reorienting the elliptical surface.

Figure 2