

Filename:FAN

ClrList1↵

ClrList2↵

ClrText↵

"Pressue DP (Pa)":?→List 1[1]↵

"Flow DP (m<sup>3</sup>÷s)":?→List 1[2]↵

"Density (kg÷m<sup>3</sup>) ":?→List 1[3]↵

"Nr Blades (st)":?→List 1[4]↵

"Rotating speed (rpm)":?→List 1[5]↵

If List 1[5]>0↵

Then "Inlet speed (m÷s)":?→List 1[6]↵

List 1[5]÷30×π→0↵

√((List 1[2]÷List 1[6])÷π)→R↵

2000×R→List 1[7]↵

Solve((0×X)<sup>2</sup>×(1-π×sin(tan<sup>-1</sup>(List 1[6]×2÷(0×X)))÷List 1[4])-(0×R)<sup>2</sup>-List 1[1]×2÷List 1[3],R,R,100×R)→X↵

2000×X→List 1[8]↵

Else 0→List 1[6]:"Inlet diam (mm)":?→List 1[7]↵

"Fan diam (mm)":?→List 1[8]↵

List 1[7]÷2000→R↵

List 1[2]÷(πR<sup>2</sup>)→List 1[6]↵

List 1[8]÷2000→0↵

Solve((0×X)<sup>2</sup>×(1-π×sin(tan<sup>-1</sup>(2×List 1[6]÷(0×X)))÷List 1[4])-(R×X)<sup>2</sup>-List 1[1]×2÷List 1[3],1,1,10000)→X↵

X÷π×30→List 1[5]↵

IfEnd↵

ClrText↵

"Inlet diam (mm)"↵

List 1[7]↵

"Fan diam (mm)"↵

List 1[8]↵

"Blade ang at inlet <45 deg"↵

tan<sup>-1</sup>(2×List 1[6]÷(List 1[7]÷1000×π×List 1[5]÷60))→List 2[1]↵

"Rotating speed (rpm)"↵

List 1[5]↵

"Air speed DP (m÷s)"↵

List 1[6]↵

"Effect DP (W)"↵

(List 1[6]<sup>2</sup>×List 1[3]÷2+List 1[1])×List 1[2]→List 2[2]↵

