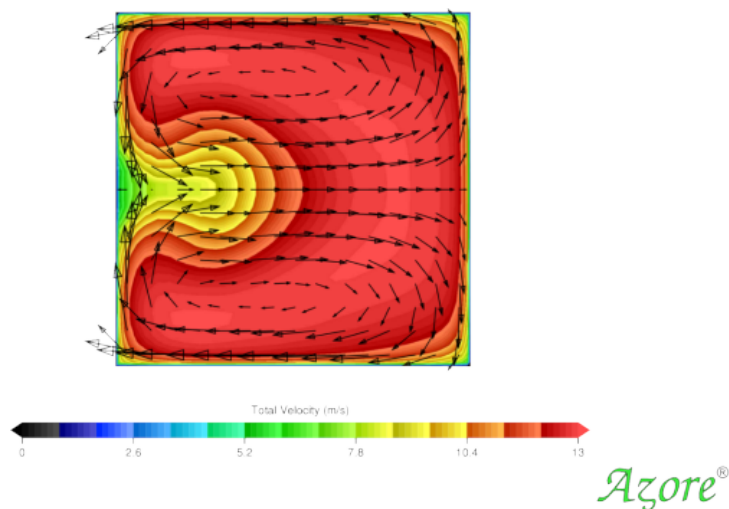
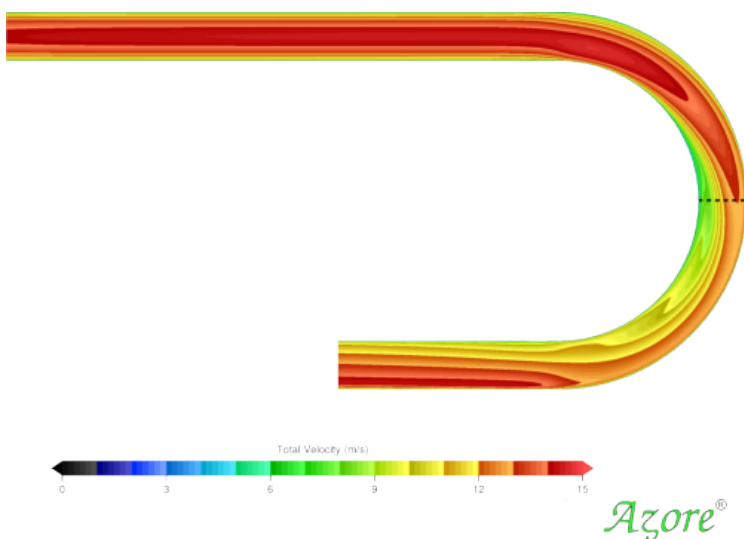


Flow Through a 180 Degree U Bend

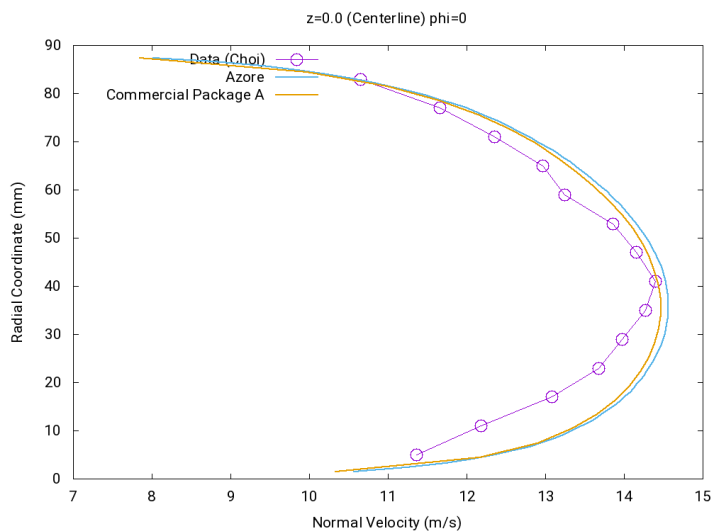
Engineering Challenge

Air flow through a 180° U bend square duct is a classic case documented by Choi, Moon, and Yang [1], with experimental data accessible via the ERCOFTAC Classic Database. This pipe geometry is known to create counter rotating vortices in the flow structure.



Azore Solution

Existing experimental data was compared to the Azore simulation results, along with the results from a well-known commercial CFD package. The same mesh topology was used with the other commercial package along with the same settings for turbulence and other numerical settings. Both CFD tools make similar predictions that represent the general flow structure.



Read more about this study [here](#).

[1].D. Choi, MOON C., and S.H. Yang, Measurement of turbulent flow characteristics of square duct with a 180 degree bend by not wire anemometer, International Symp. on Engineering Turbulenze modeling and measurement, ERCOFTAC, 1990. Part of the Classic Database.

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