

Pump Data

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All dataset is stored in .xls format. The excel worksheet has velocity magnitude data and the corresponding X/Y/Z coordinates for each 2D plane. The X/Y/Z coordinates should match with the CAD and CFD geometry coordinates. The PIV data is posted in the table below for the following six flow conditions

Condition 1: 2.5 lpm and 2500 rpm

Condition 2: 2.5 lpm and 3500 rpm

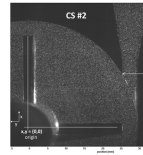
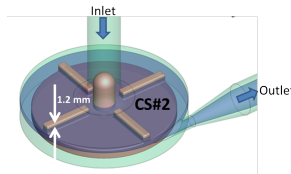
Condition 3: 4.5 lpm and 3500 rpm

Condition 4: 6.0 lpm and 2500 rpm

Condition 5: 6.0 lpm and 3500 rpm

Condition 6: 7.0 lpm and 3500 rpm

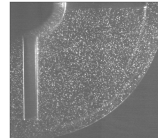
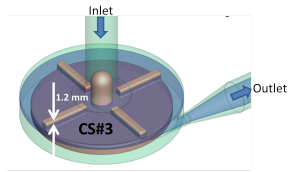
Blade Passage (First quadrant)



[Condition 1](#) [Condition 2](#)
[Condition 3](#) [Condition 4](#)

[Condition 5](#) [Condition 6](#)

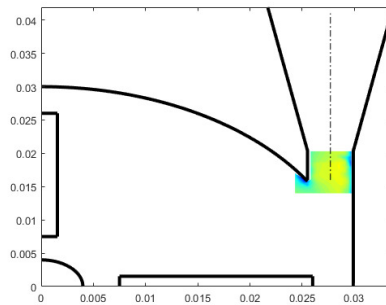
Blade Passage (Second quadrant)



[Condition 1](#) [Condition 2](#)
[Condition 4](#) [Condition 5](#)

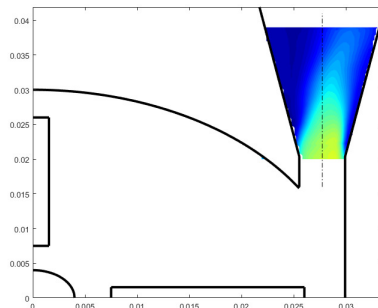
[Condition 6](#)

Cutwater region



[Condition 5](#)

Diffuser region



[Condition 1](#) [Condition 2](#)

[Condition 4](#) [Condition 5](#)

[Condition 6](#)

PUMP DATA

Please contact prasanna.hariharan@fda.hhs.gov if you have trouble accessing the dataset

Citations

Please cite the following articles while using the data from this site in your publications

1. Hariharan et al. Inter-Laboratory Characterization of the Velocity Field in the FDA Blood Pump Model Using Particle Image Velocimetry (PIV), CVET Journal 2018, <https://doi.org/10.1007/s13239-018-00378-y>
2. Malinauskas et al. FDA Benchmark Medical Device Flow Models for CFD Validation, ASAIO Journal, 2017, DOI: 10.1097/MAT.0000000000000499
3. Ponnaluri et al. Comparison of Interlaboratory CFD Simulations of the FDA Benchmark Blood Pump Model, ASAIO Journal, doi: 10.1097/01.mat.0000840776.68172.99