Changing the Fan Curve in Star CCM+

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Fan Curve Database

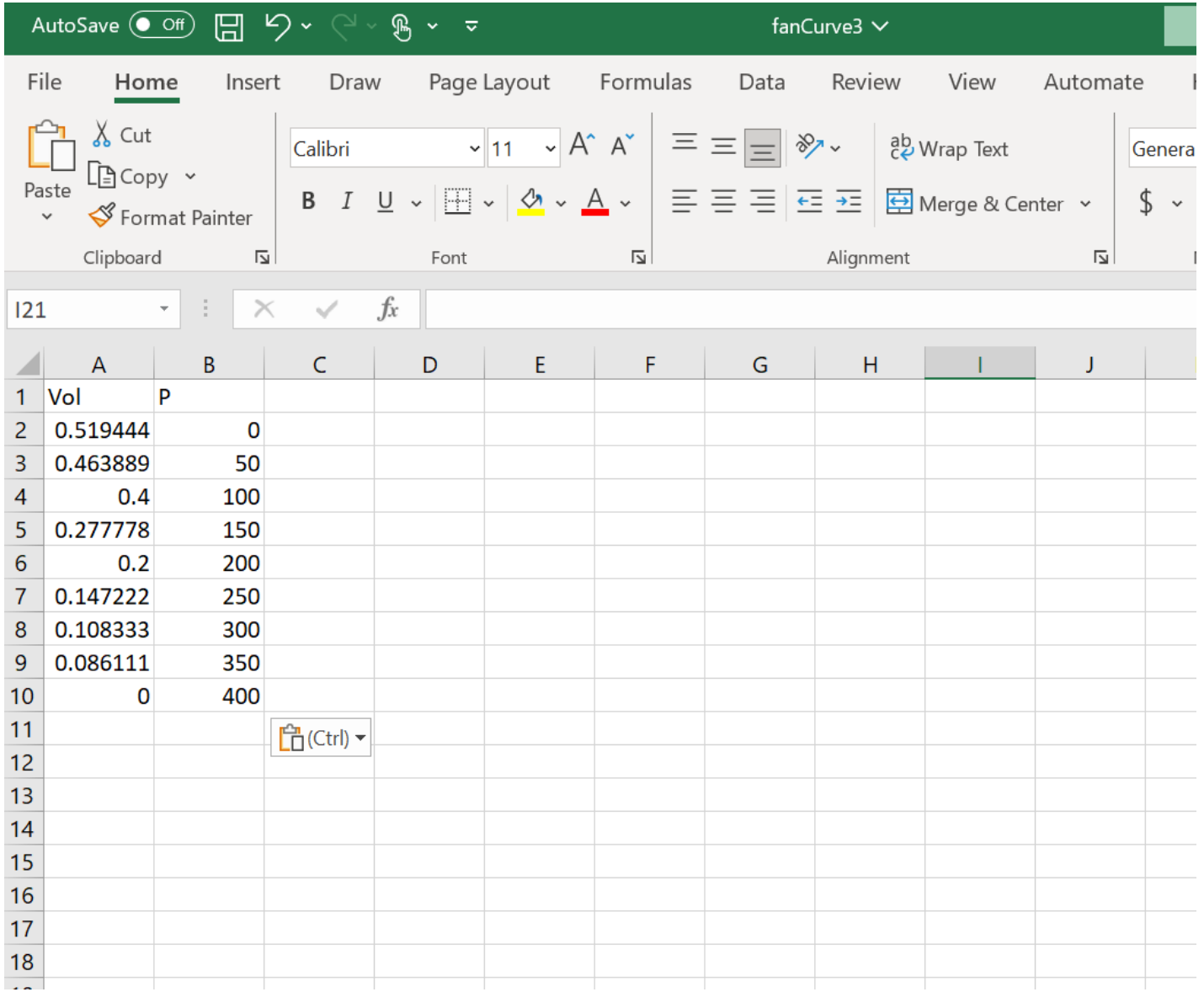
Add fan you found to fanCurveLibrary excel sheet (found here) in a similar fashion to the others. Include name of new .csv file that will contain the imported information.

VA75-A101-90A	Static pressure Pa	Static pressure mm H20	Airflow m^3/h	Current draw A	Airflow CFM	Static pressure in H20	fanCurve2.csv	Volumetric Flow m^3/s	Static Pressure Pa
	0	0	700	4.3	413	0		0.194444444	0
	50	5	620	4.5	366	0.2		0.172222222	50
	75	7.5	580	4.6	342	0.3		0.161111111	75
	100	10	540	4.7	319	0.4		0.15	100
	125	12.5	500	4.9	295	0.5		0.138888889	125
	150	15	470	5	277	0.6		0.130555556	150
	175	17.5	420	5.1	248	0.7		0.116666667	175
	200	20	330	5.3	195	0.8		0.091666667	200
	250	25	200	5.7	118	1		0.055555556	250
	300	30	130	5.9	77	1.2		0.036111111	300
	350	35	0	6.3	0	1.4		0	350

VA15-AP70-/LL-39A	Static pressure Pa	Static pressure mm H20	Airflow m^3/h	Current draw A	Airflow CFM	Static pressure in H20	fanCurve3.csv	Volumetric Flow m^3/s	Static Pressure Pa
	0	0	1870	10.5	1103	0		0.519444444	0
	50	5	1670	11.3	985	0.2		0.463888889	50
	100	10	1440	12	850	0.4		0.4	100
	150	15	1000	11.4	590	0.6		0.277777778	150
	200	20	720	12.4	425	0.8		0.2	200
	250	25	530	12.7	313	1		0.147222222	250
	300	30	390	13.2	230	1.2		0.108333333	300
	350	35	310	13.5	183	1.4		0.086111111	350
	400	40	0	15.4	0	1.6		0	400

Creating the Fan Curve

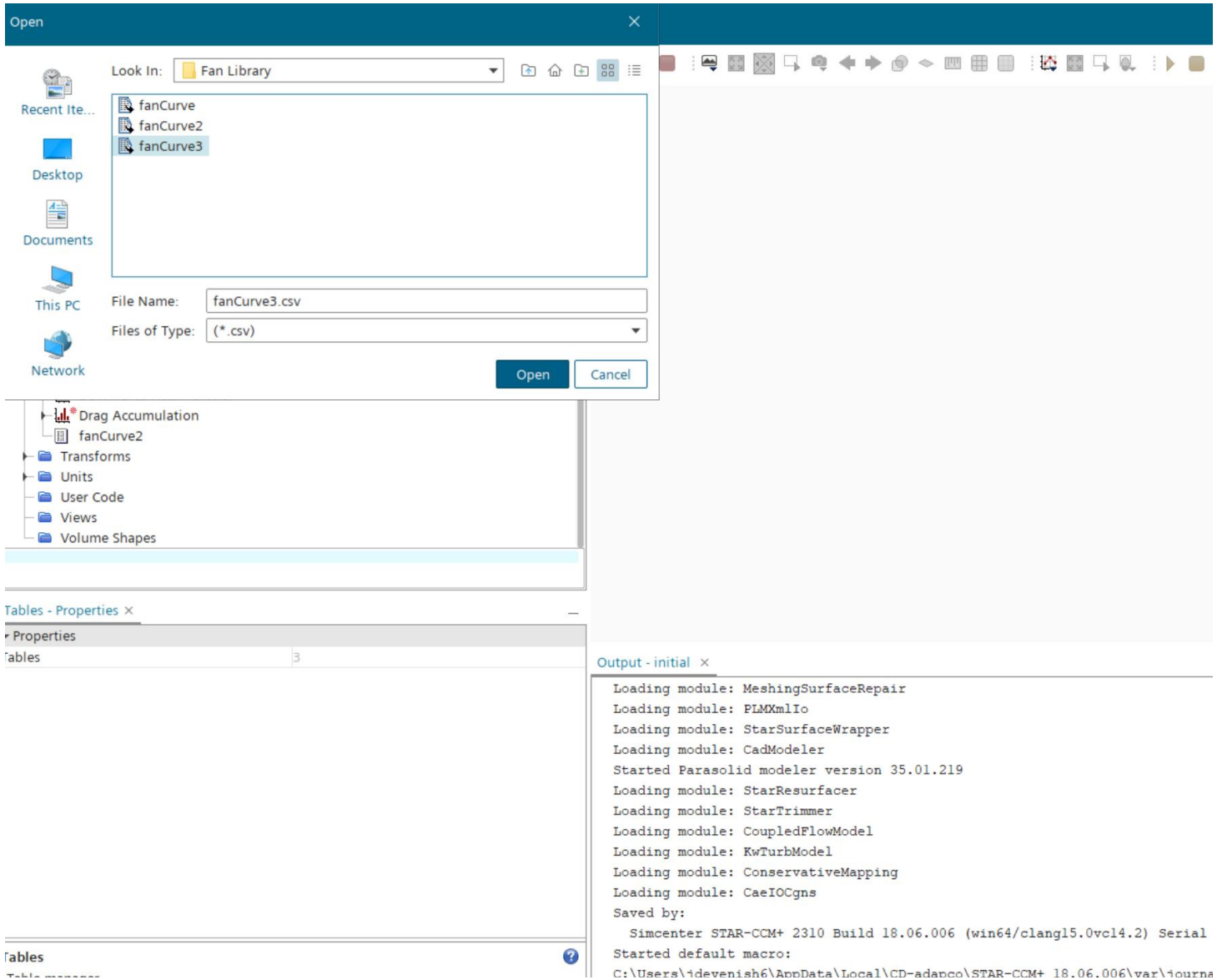
Create .csv file with the matching name and include the two columns exactly as shown. Star will read a volumetric flow and a static pressure input



	A	B	C	D	E	F	G	H	I	J
1	Vol	P								
2	0.519444	0								
3	0.463889	50								
4	0.4	100								
5	0.277778	150								
6	0.2	200								
7	0.147222	250								
8	0.108333	300								
9	0.086111	350								
10	0	400								
11										
12										
13										
14										
15										
16										
17										
18										

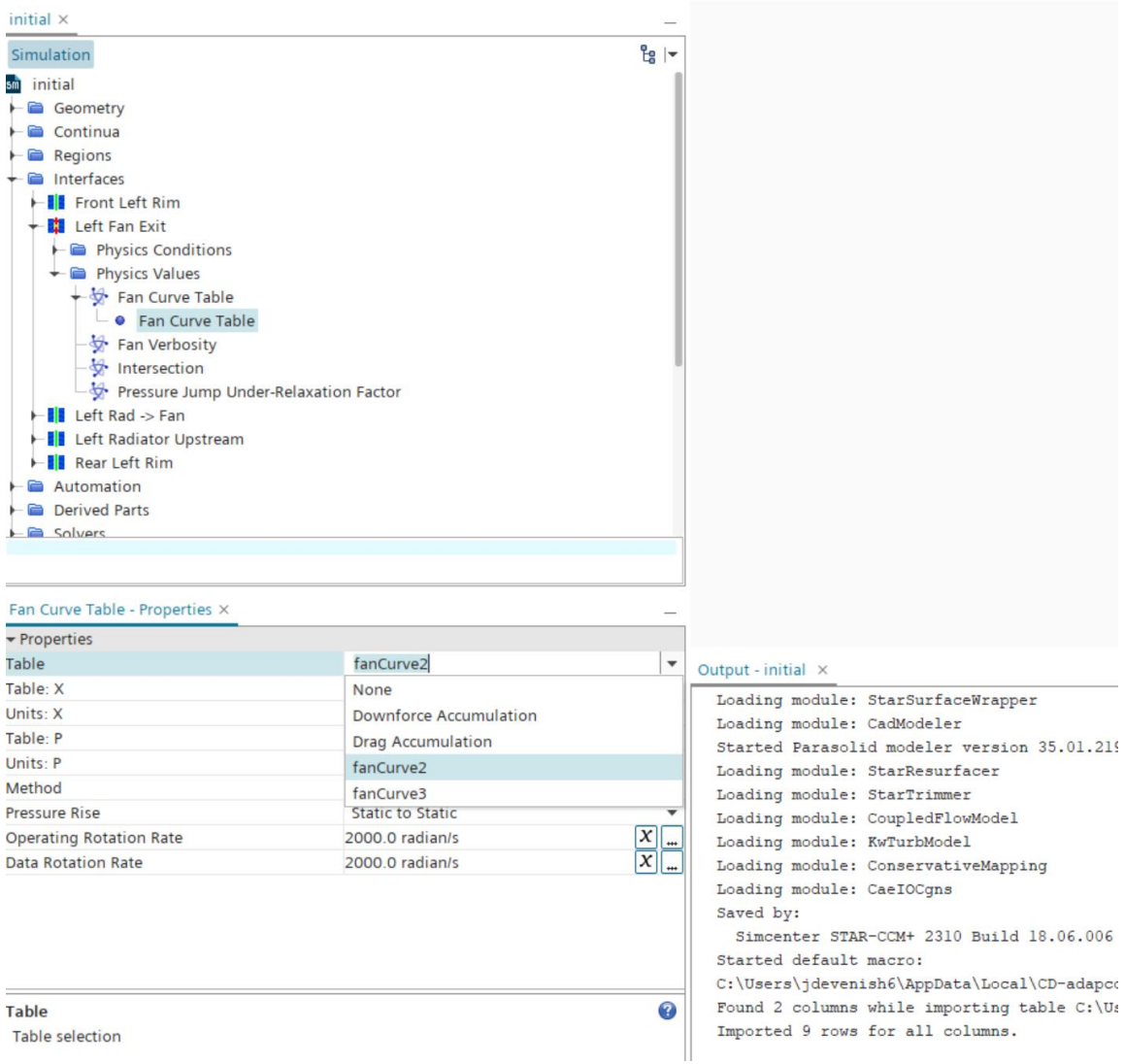
Adding the Fan Curve to Star

(In star on the left panel) Tools -> Tables -> New Table -> File Table. Find the .csv you just created and hit open



Using the Fan Curve

Interfaces -> Fan Exit -> Physics Values -> Fan Curve Table. Select the new table you just imported. Always do a once over on the other physics values from an engineering perspective (e.g. operating speed may change from fan to fan, different motec settings). After this you should be good to run with a new fan!



Original instructions can be found here in Slack: https://gtmotorsports.slack.com/archives/C04NVUE2GRX/p1735511094039979