

SPITFIRE WING GEOMETRY - TRUE ELLIPTIC PLANFORM

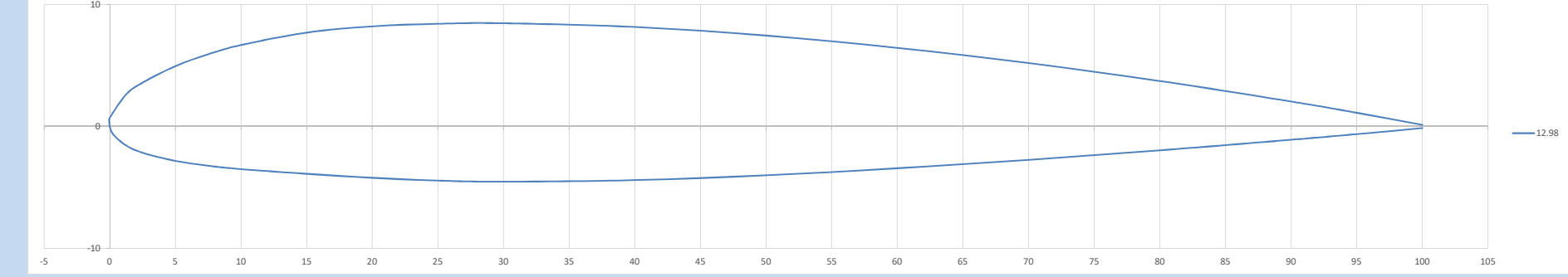
Distance from dihedral	z	STN	Dhdr	CHORD	INCID.	% THICK.	A	B	C	D	L.E. RAD.	ORDINATES	NOSE SHAPE																																
													0.0125	0.025	0.05	0.075	0.1	0.15	0.2	0.25	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.95	1																
0	0	0	0	100	2	13.17	24.5 1.570	62.033	61.995	2.165	1.913	DIST FROM LE	-0.035	0	0	0.281	1.25	2.5	5	7.5	10	15	20	25	30	40	50	60	70	80	90	95	100												
												UPPER ORD	0.313	0.736	0	-	2.672	3.644	5.008	5.997	6.755	7.781	8.299	8.515	8.558	8.250	7.540	6.523	5.257	3.770	2.069	1.135	0.140	-	-	-	-	-	-	-	-	-	-	-	
												LOWER ORD	-	-	-	-	-0.680	-1.582	-2.185	-2.873	-3.283	-3.567	-3.966	-4.299	-4.531	-4.621	-4.493	-4.087	-3.500	-2.792	-1.994	-1.113	-0.638	-0.137	-	-	-	-	-	-	-	-	-	-	-
27.7	2	0	99.222	2	12.708	24.260	57.425	57.390	2.004	1.766	DIST FROM LE	-0.033	0	0	0.260	1.240	2.481	4.961	7.442	9.922	14.883	19.844	24.806	29.767	39.689	49.611	59.533	69.455	79.378	89.300	94.261	99.222													
											UPPER ORD	0.299	0.680	0	-	2.555	3.495	4.818	5.778	6.515	7.512	8.013	8.219	8.260	7.962	7.276	6.295	5.074	3.639	1.997	1.094	0.134	-	-	-	-	-	-	-	-	-	-	-		
											LOWER ORD	-	-	-	-	-0.628	-1.515	-2.084	-2.726	-3.105	-3.365	-3.731	-4.044	-4.267	-4.353	-4.235	-3.851	-3.298	-2.630	-1.878	-1.049	-0.603	-0.132	-	-	-	-	-	-	-	-	-	-	-	
29.428	2A	0	99.122	2	12.677	24.232	57.137	57.102	1.994	1.755	DIST FROM LE	-0.033	1	0	0.259	1.239	2.478	4.956	7.434	9.912	14.868	19.824	24.780	29.736	39.649	49.561	59.473	69.385	79.297	89.209	94.165	99.122													
											UPPER ORD	0.298	0.676	0	-	2.546	3.484	4.803	5.761	6.496	7.491	7.990	8.196	8.236	7.939	7.255	6.277	5.059	3.628	1.991	1.091	0.133	-	-	-	-	-	-	-	-	-	-	-		
											LOWER ORD	-	-	-	-	-0.625	-1.509	-2.076	-2.715	-3.092	-3.350	-3.714	-4.026	-4.247	-4.333	-4.216	-3.834	-3.283	-2.618	-1.869	-1.044	-0.600	-0.131	-	-	-	-	-	-	-	-	-	-	-	
0	31	DI	Dist to spar datum = 0.041	3	99.025	2	12.649	24.206	56.876	56.841	1.985	1.746	DIST FROM LE	-0.033	0	0	0.257	1.238	2.476	4.951	7.427	9.902	14.854	19.805	24.756	29.707	39.610	49.512	59.415	69.317	79.220	89.122	94.073	99.025											
													UPPER ORD	0.297	0.673	0	-	2.538	3.473	4.789	5.745	6.478	7.470	7.969	8.174	8.214	7.917	7.236	6.260	5.045	3.618	1.985	1.088	0.133	-	-	-	-	-	-	-	-	-	-	-
													LOWER ORD	-	-	-	-	-0.621	-1.503	-2.069	-2.704	-3.079	-3.336	-3.698	-4.008	-4.229	-4.315	-4.198	-3.818	-3.269	-2.607	-1.861	-1.040	-0.597	-0.131	-	-	-	-	-	-	-	-	-	-

Arbitrary distance from C/L of aircraft

DFD	z	Dhdr	CHORD	INCID.	% THICK.	A	B	C	D	L.E. RAD.	DIST FROM LE	0.009	0	0	0.071	0.75	1.5	3	4.5	6	9	12	15	18	24	30	36	42	48	54	57	60	
147	178	6	60.000	0.081	8.49	16.076	32.399	32.399	0.046	0.477	UPPER ORD	0.086	0.186	0	-	1.041	1.473	2.098	2.561	2.920	3.405	3.636	3.717	3.729	3.590	3.281	2.841	2.291	1.643	0.899	0.490	0.054	
											LOWER ORD	-	-	-	-	-0.172	-0.599	-0.781	-0.952	-1.030	-1.074	-1.139	-1.236	-1.327	-1.367	-1.338	-1.215	-1.035	-0.822	-0.586	-0.332	-0.196	-0.053

Arbitrary NACA 2200 series airfoil

CHORD	% THICK.	L.E. RAD.	DIST FROM LE	-0.034	0	0	0.273	1.25	2.5	5	7.5	10	15	20	25	30	40	50	60	70	80	90	95	100	
100	12.98	1.856	UPPER ORD	0.308	0.715	0	-	2.63	3.59	4.94	5.92	6.68	7.69	8.21	8.42	8.46	8.16	7.45	6.45	5.20	3.73	2.05	1.12	0.14	
			LOWER ORD	-	-	-	-	-0.660	-1.56	-2.15	-2.82	-3.22	-3.49	-3.88	-4.21	-4.43	-4.52	-4.40	-4.00	-3.43	-2.73	-1.95	-1.09	-0.63	-0.14



$$C(z) = C_0 \sqrt{1 - \left(\frac{z}{222.5}\right)^2}$$

$$A(z) = \sqrt{1 - \left(\frac{z}{222.5}\right)^2} \left[14.5 \left[1 - \left[1 - \left(\frac{z}{222.5}\right)^2 \right]^{10.72} \right]^{1.57} + 35.5 \right] - 11$$

Table with columns for Station (x, y), numerical values, and categorical labels (Chord, LE Rad, Incid., A, B, C, D, Dihedr., Yspur). Rows include STATION 0, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 23A, 23B, 23C, 23D.

Table with columns for Station (x, y), numerical values, and categorical labels (Chord, LE Rad, Incid., A, B, C, D, Dihedr., Yspur). Rows include STATION 0 and STATION 23D.

Table with columns for Station (x, y), numerical values, and categorical labels (Chord, LE Rad, Incid., A, B, C, D, Dihedr., Yspur). Rows include STATION 0 and STATION 23D.

Canted airfoil																								
	L.E.	T.E	DIST FROM LE	θ	0.145		1.354	2.708	5.415	8.123	10.831	16.246	21.661	27.076	32.492	43.322	54.153	64.984	75.814	86.645	97.475	102.891	108.306	
z	27.6	12	z	C	108.306		27.6	27.405	27.21	26.82	26.43	26.04	25.26	24.48	23.7	22.92	21.36	19.8	18.24	16.68	15.12	13.56	12.78	12
C	99.228	99.854	CHORD		1.766		99.228	99.239	99.249	99.271	99.292	99.313	99.353	99.393	99.431	99.468	99.538	99.603	99.663	99.719	99.769	99.814	99.835	99.854
A	2.278	104.899	% THICK.	L.E. RAD	1.748		12.710	12.714	12.717	12.724	12.731	12.738	12.752	12.766	12.779	12.793	12.820	12.848	12.874	12.901	12.928	12.954	12.967	12.980
x / y	x / y	x / y	DIST _{local}	-0.033	0	0	0.260	1.240	2.481	4.964	7.447	9.931	14.903	19.879	24.858	29.840	39.815	49.802	59.798	69.803	79.815	89.833	94.843	99.854
-0.033	0	0.260	UPPER ORD	0.299	0.680	0	-	2.557	3.499	4.825	5.791	6.533	7.541	8.054	8.272	8.323	8.041	7.365	6.387	5.158	3.707	2.038	1.119	0.137
0.299	0.680	-0.629	LOWER ORD	-	-	0	-0.629	-1.516	-2.086	-2.731	-3.115	-3.379	-3.755	-4.079	-4.311	-4.406	-4.302	-3.927	-3.375	-2.702	-1.936	-1.084	-0.623	-0.135

