

<b>STAVATTI</b>		MINNESOTA
MILITARY AEROSPACE		
SCALE 1/48	<b>MASTER ARRANGEMENT</b>	MODEL SM-27J/L
ENGINEER C.R. Beskar		DRAWING NUMBER SM-27-001409
APPROVED 		DATE 21/12/2009

	WING	CANARD	HORIZ TAIL	VERT TAIL
AREA SQ FT.	243.39	36.37	88.52	58.32
SPAN FEET	47.00	12.10	20.58	12.96
ASPECT RATIO	9.08	4.03	2.39	2.88
TAPER RATIO	0.44	0.44	0.47/0.25	0.35
SWEEP AT 25°C	2.6°	32.2°	29.4°/19.4°	32.7°
ROOT CHORD FEET	7.19	4.19	6.18	6.67
TIP CHORD FEET	3.17	1.83	2.89/1.55	2.33
MAC FEET	5.44	3.16	4.73/4.33	4.85

**WING**  
 DIHEDRAL AT 0.25C 1.00°  
 INCIDENCE ROOT 0.00° TIP -0.40°  
 AIRFOIL SECTION-ROOT STAVATTI 10%  
 AIRFOIL SECTION-TIP STAVATTI 9%  
 AVERAGE AIRFOIL SECTION STAVATTI 9.5%

**FLAPS**  
 AREA SQ FT TOTAL 26.77  
 DEFLECTION TAKE-OFF 10°  
 DEFLECTION LANDING 30°  
 MAX DEFLECTION 40°  
 PERCENT OF WING CHORD 31%  
 PERCENT WING AREA AFFECTED 38%  
 TYPE DOUBLE SLOTTED FOWLER

**AILERON**  
 AREA SQ FT TOTAL 15.88  
 DEFLECTION DEGREES DN 30°-UP 30°  
 TYPE SEMI-AERODYNAMICALLY MASS BALANCED

**VERTICAL TAIL**  
 RUDDER AREA SQ FT 32.68  
 RUDDER DEFLECTION DEGREES +/- 30°  
 TYPE SEMI-AERODYNAMICALLY MASS BALANCED  
 AIRFOIL SECTION NACA 0009

**CANARD**  
 ELEVATOR AREA SQ FT 9.98  
 ELEVATOR DEFLECTION DEGREES DN 25°-UP 25°  
 TYPE SEMI-AERODYNAMICALLY MASS BALANCED  
 AIRFOIL SECTION NACA 63-209  
 DIHEDRAL 3.00°

**HORIZONTAL TAIL**  
 ELEVATOR AREA SQ FT 71.79  
 ELEVATOR DEFLECTION DEGREES DN 28°-UP 28°  
 TYPE SEMI-AERODYNAMICALLY MASS BALANCED  
 AIRFOIL SECTION NACA 0009  
 DIHEDRAL -5.00°

**POWERPLANT**  
 NUMBER 1  
 TYPE TURBOFAN  
 MODEL NON-AFTERBURNING GEAE F414  
 MAXIMUM MILITARY THRUST, SL-LBS 14,756  
 MAXIMUM MILITARY THRUST, SL-SFC 0,793  
 ENGINE LENGTH, INCHES 83.00  
 ENGINE MAXIMUM DIAMETER, INCHES 35.00  
 ENGINE FAN DIAMETER, INCHES 28.00  
 ENGINE DRY WEIGHT, LBS 2009

**AIR INLET**  
 NUMBER 2  
 TYPE BIFURCATED PITOT/NORMAL SHOCK  
 UNIT CAPTURE AREA, SQ IN 365  
 TOTAL INLET SYSTEM CAPTURE AREA, SQ IN 730

**NOSE GEAR**  
 NUMBER OF STRUTS 1  
 NUMBER OF WHEELS PER STRUT 1  
 TIRE SIZE 19.5 x 6.75-8  
 PLY RATING 10TL  
 INFLATION PRESSURE, PSI 110

**MAIN GEAR**  
 NUMBER OF STRUTS 2  
 NUMBER OF WHEELS PER STRUT 1  
 TIRE SIZE 24 x 8.0-13  
 PLY RATING 18  
 INFLATION PRESSURE, PSI 285

**WEIGHTS (SM-27L)**  
 AIRCRAFT EMPTY WEIGHT (LBS) 12,624  
 DESIGN USEFUL LOAD (LBS) 15,341  
 FLIGHT CREW & FIXED AMMUNITION (LBS) 1,341  
 FUEL-STANDARD INTERNAL (LBS) 6,000  
 WARLOAD WITH STANDARD INTERNAL FUEL (LBS) 8,000  
 CLEAN TAKEOFF GROSS WEIGHT (LBS) 19,965  
 MAXIMUM GROSS TAKEOFF WEIGHT (LBS) 27,965

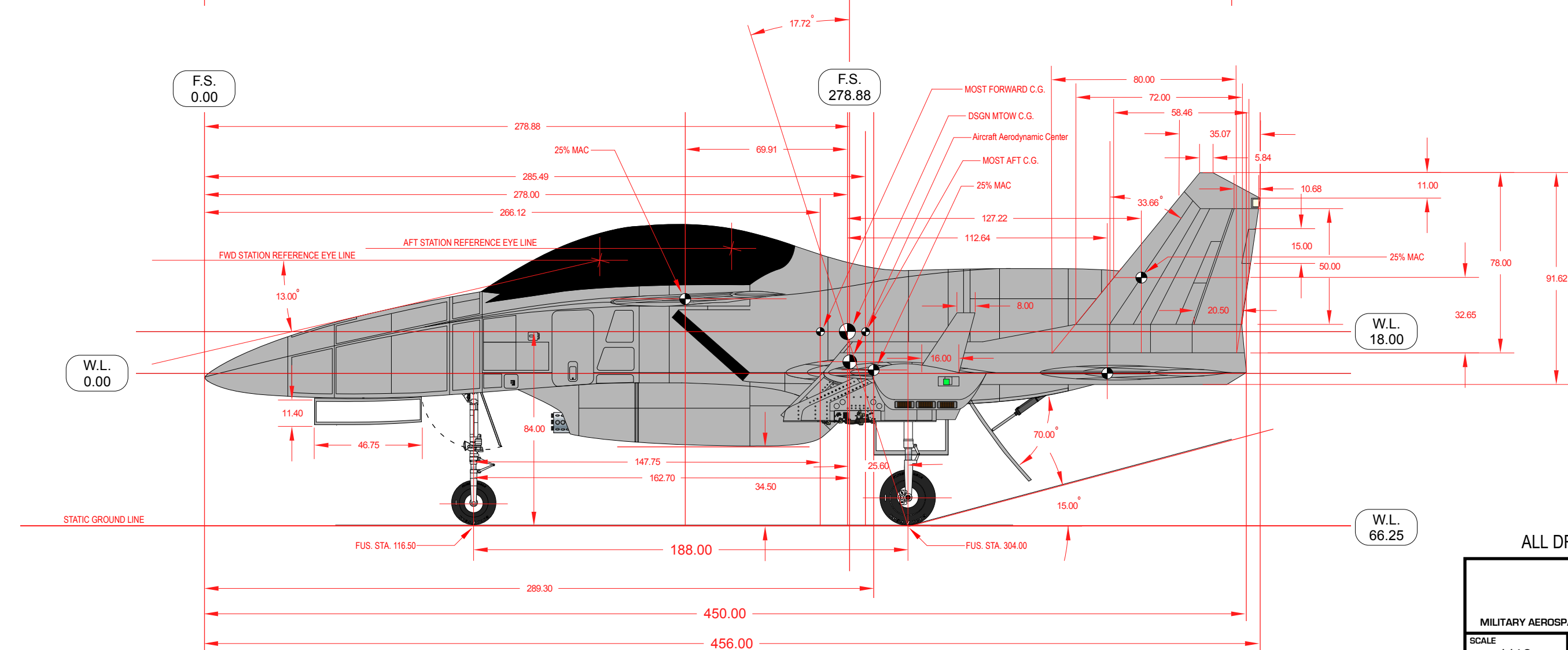
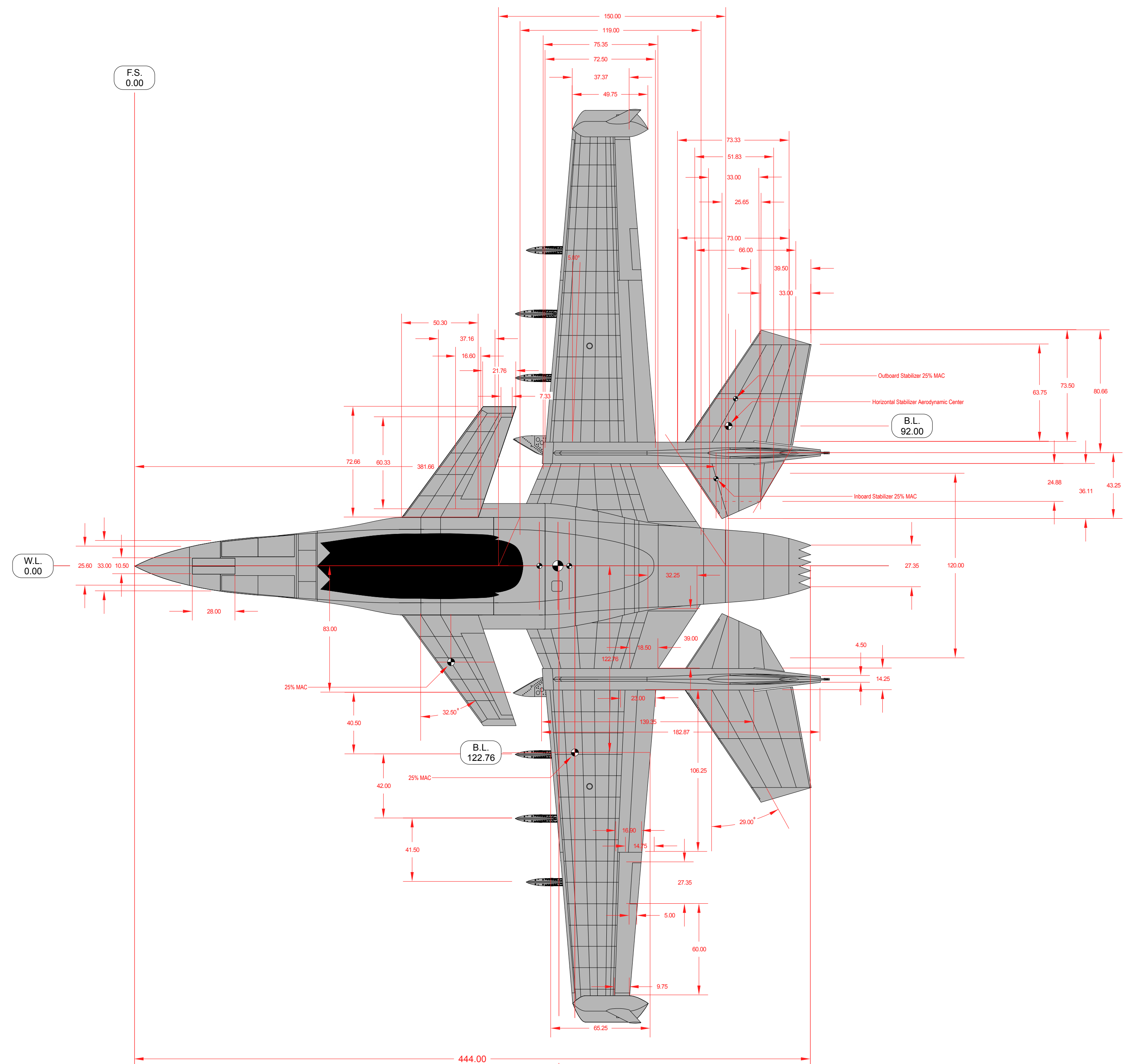
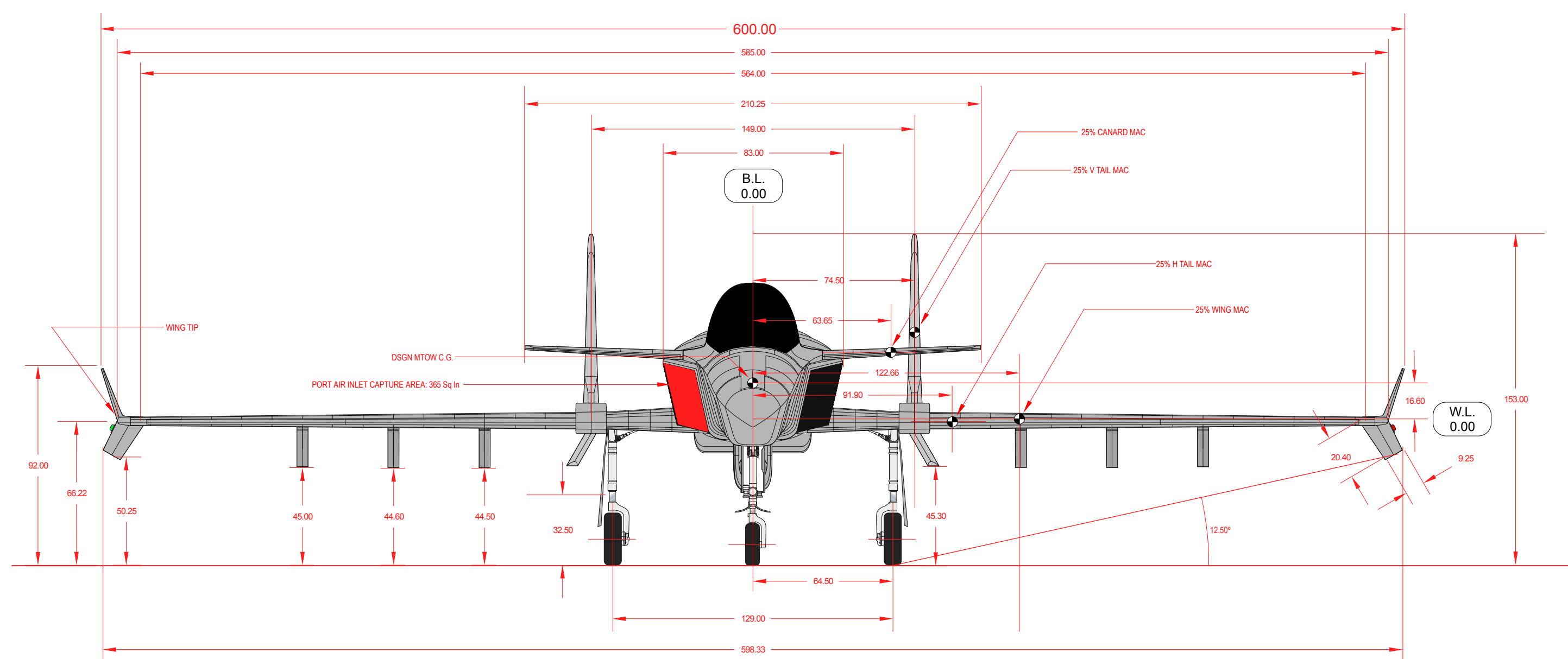
**CENTER OF GRAVITY LOCATIONS**  
 AIRCRAFT AERODYNAMIC CENTER FROM DATUM (FT) 23.24  
 AIRCRAFT AERODYNAMIC CENTER MAC (FT) 5.14  
 MAC LE DISTANCE FROM DATUM (FT) 21.97

MOST FORWARD CG, % OF MAC 4.4%  
 MOST FORWARD CG, DISTANCE FROM DATUM (FT) 22.18

MTOW CG, % OF MAC 23.46%  
 MTOW CG, DISTANCE FROM DATUM (FT) 23.17

MOST AFT CG, % OF MAC 36.00%  
 MOST AFT CG, DISTANCE FROM DATUM (FT) 23.79

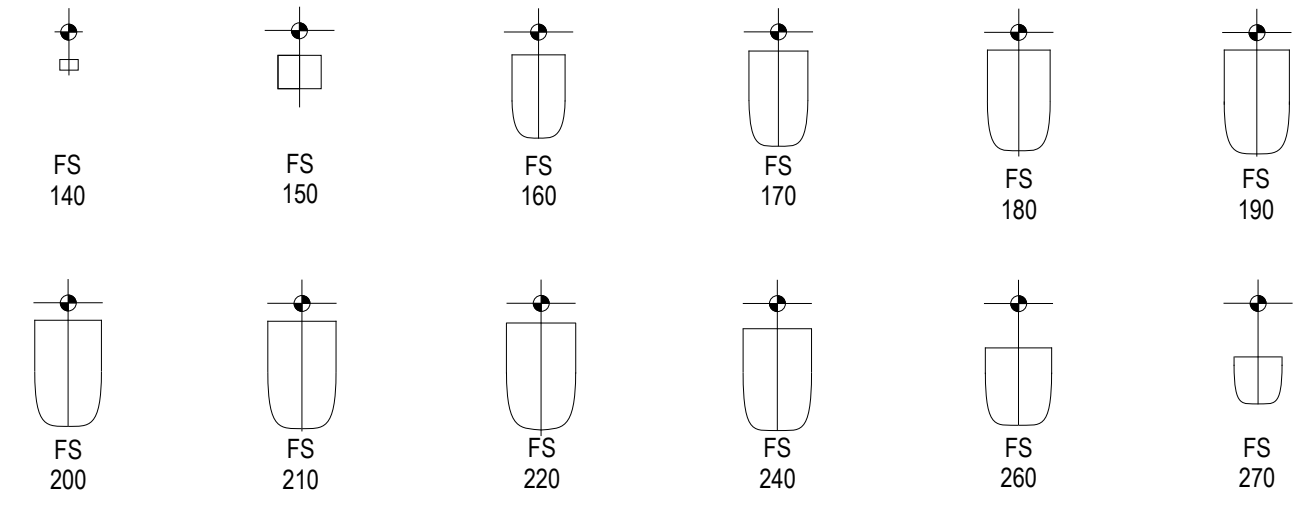
**WETTED AREA (SQ FT)**  
 FUSELAGE 524  
 EMPENNAGE SUPPORT BOOMS 134  
 VENTRAL CANNON FAIRING 51  
 AIR INLETS 31  
 WINGTIP DISPENSERS 28  
 STORES PYLONS 116  
 WING 461  
 CANARD 75  
 HORIZONTAL STABILIZER 149  
 VERTICAL STABILIZER 134  
 TOTAL 1,703



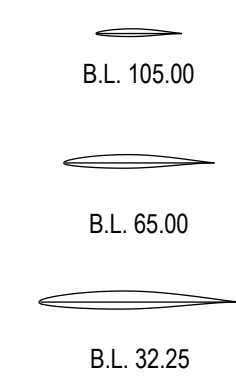
ALL DRAWING DIMENSIONS ARE IN INCHES (IN)

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MILITARY AEROSPACE	SCALE	MODEL	DATE
	1/48	SM-27J/L	
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C.R. Beskar			SM-27-001509
APPROVED			DATE
			21/12/2009

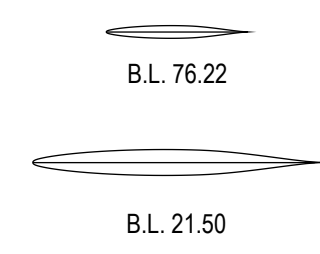
**VENTRAL CANNON FAIRING CROSS SECTIONS**



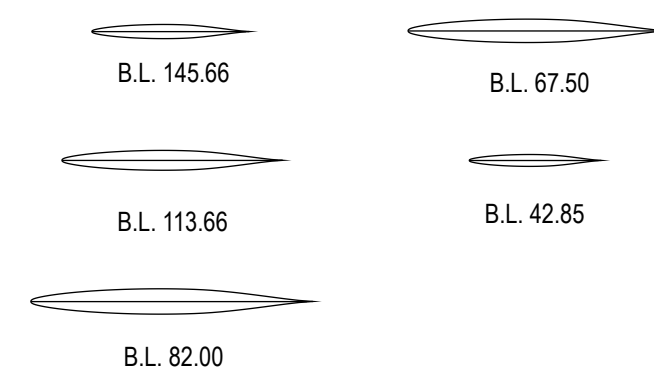
**CANARD SECTIONS**



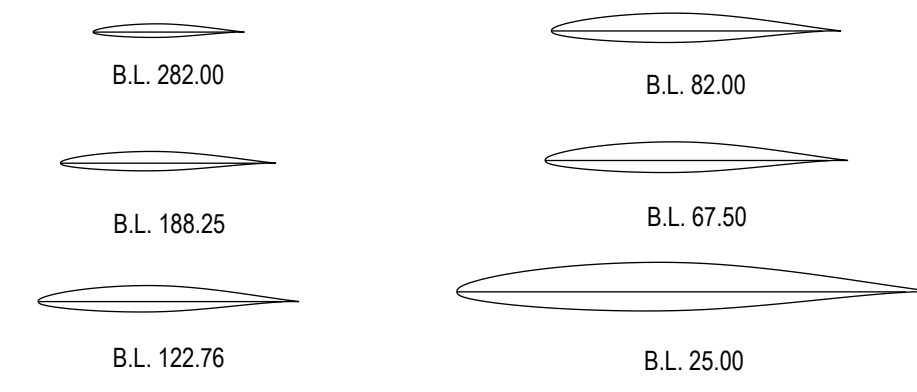
**V TAIL SECTIONS**



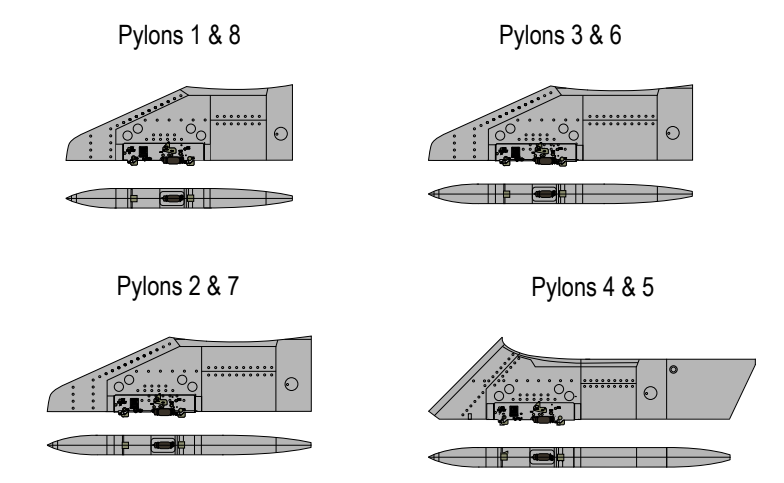
**H TAIL SECTIONS**



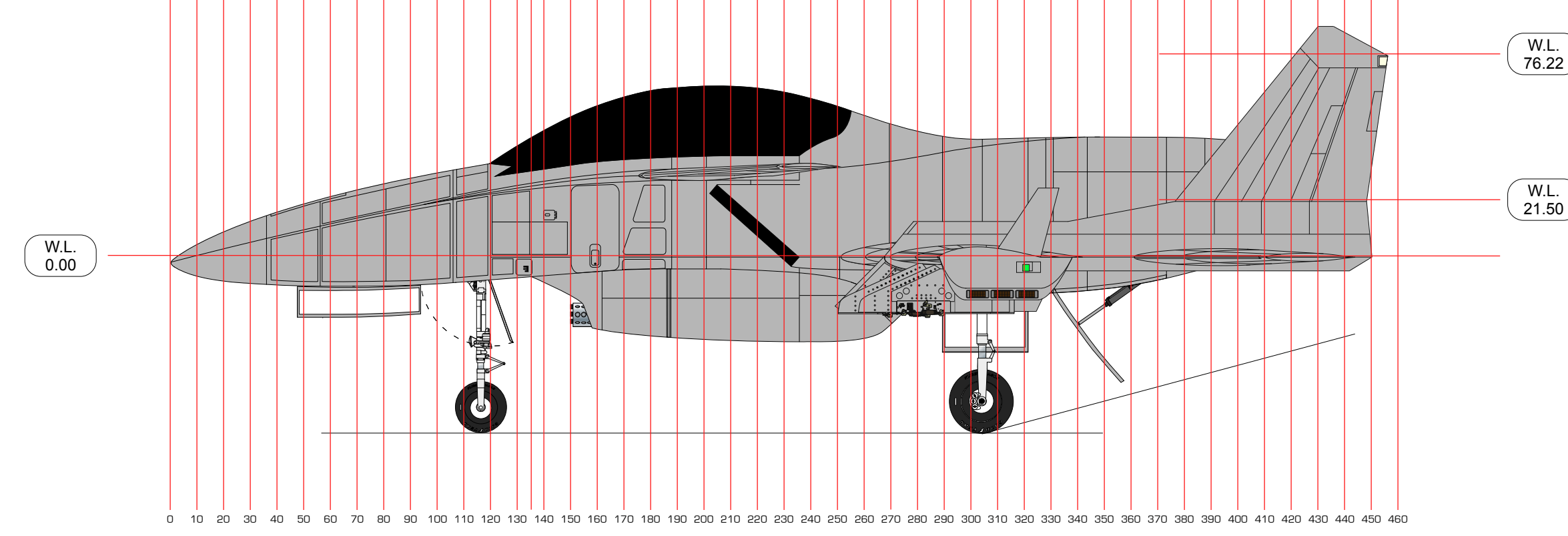
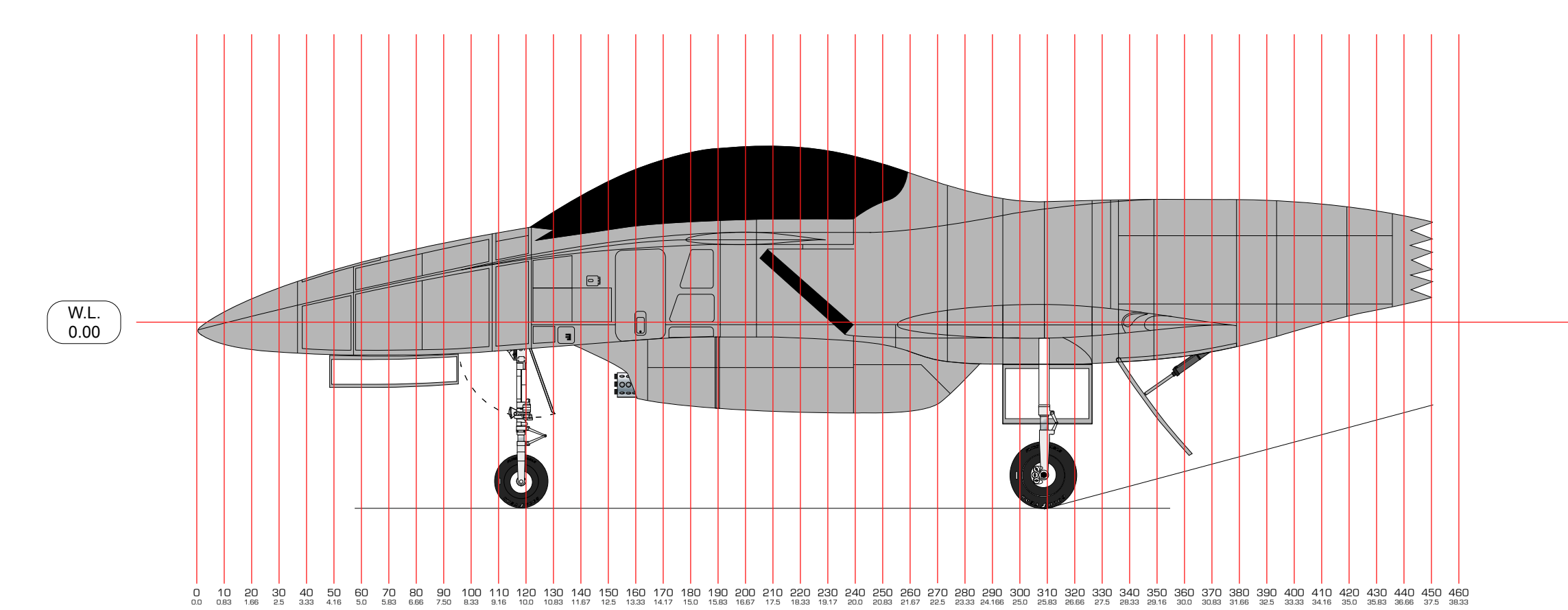
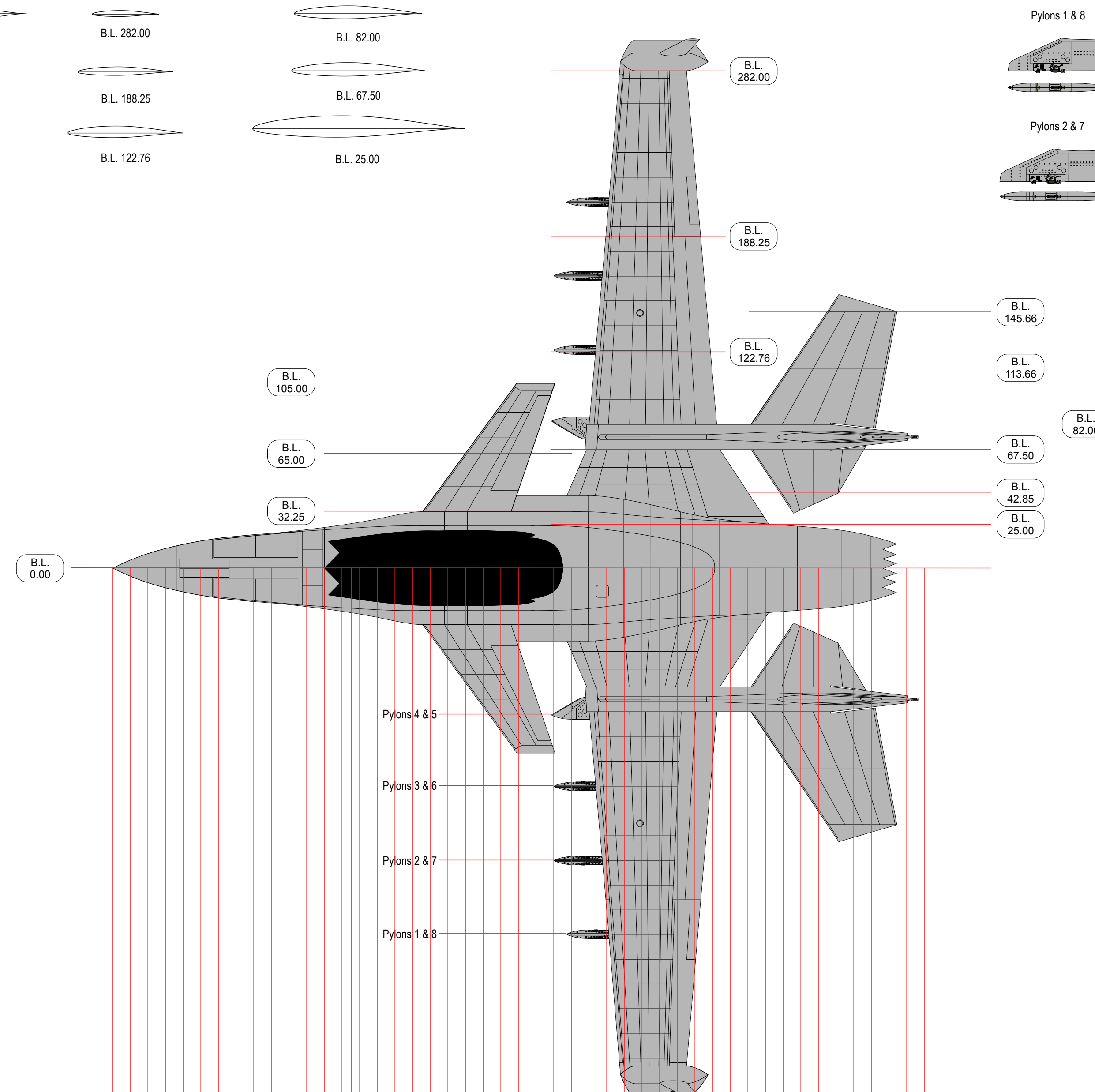
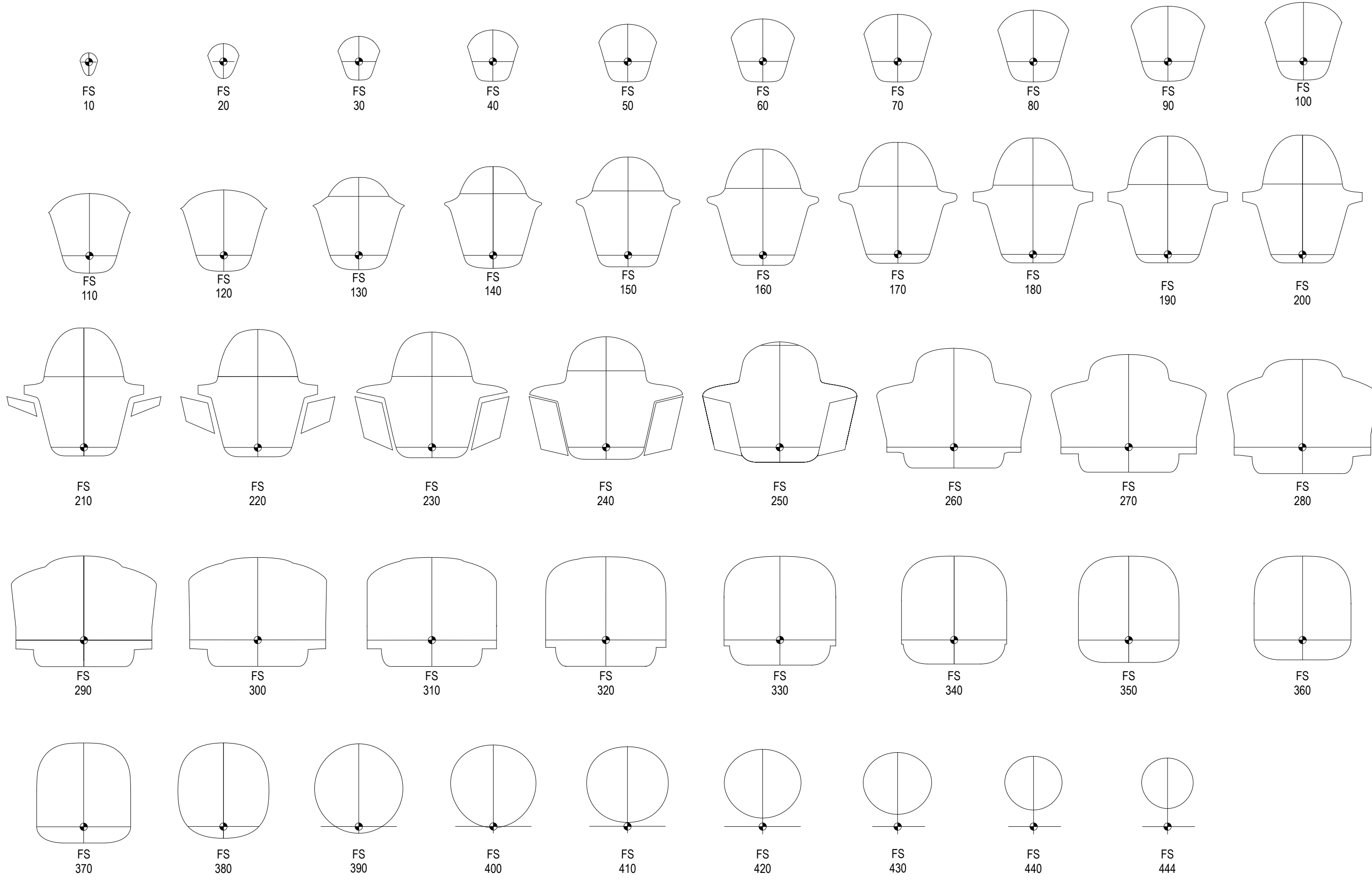
**WING SECTIONS**



**STORES PYLONS**



**FUSELAGE CROSS SECTIONS**



0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460  
 D A T U M

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 D A T U M

CROSS SECTION STATIONS ARE IN INCHES FROM DATUM (IN)

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ENGINEER		DRAWING NUMBER	
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