

AIRFOIL

THE AIRFOIL (RIB SHAPE) USED IN THE EASY RISER WING IS A SPECIAL DESIGN FOR LOW AIRSPEED. IT GIVES THE WINGS VERY HIGH LIFT, QUITE LOW DRAG, AND IS EXCEPTIONALLY STABLE IN PITCH. THE PRESSURE CENTER (AERODYNAMIC BALANCE POINT, CHORDWISE) HAS A VERY SLIGHT SHIFT COMPARED WITH MODERN HIGH SPEED AIRFOILS. AT LOW ANGLES OF ATTACK (HIGH SPEEDS) THE AERODYNAMIC PRESSURE CENTER IS AT ABOUT 36%. AT HIGH ANGLES OF ATTACK ($16-18^\circ$) THE PRESSURE CENTER MOVES TO ABOUT 29%. THE AIRFOIL IS "S" SHAPED (REFLEXED) TO ASSURE PITCH STABILITY AT ALL ANGLES OF ATTACK.

THE ORIGIN OF THE AIRFOIL IS IN THE EIFFEL DESIGNS (THE SAME ENGINEER WHO DESIGNED THE EIFFEL TOWER IN PARIS) OF THE EARLY DAYS OF AVIATION WHEN AIRCRAFT FLEW SLOW. ONE OF THESE AIRFOILS WAS MODIFIED IN 1975 BY LARRY MAURO FOR HIGHER LIFT AT LOWER SPEEDS AND DESIGNATED LM 7610.

THE AIRFOIL IS VERY UNIQUE TO FOOT-LAUNCHED SAILPLANES IN THAT IT IS A DOUBLE SURFACED RIGID AIRFOIL COVERED WITH DOPED FABRIC. THE RIBS ARE STAMPED ALUMINUM ALLOY, AND RIVET DIRECTLY TO THE SPARS.

LM 7610
AIRFOIL

P/N 53 R
53 L

