

2.1.13 Form of wing tip	truncation parallel to wing root and addition of a half body of revolution
2.2 Body data (detail description of body geometry)	no body
2.3 Fabrication tolerances/waviness	0.15 mm
2.4 Additional remarks	see also figure B1-1
3. <u>Wind tunnel</u>	
3.1 Designation	S2MA (ONERA - Modane Center)
3.2 Type of tunnel	
3.2.1 Continuous or blowdown. Indicate minimum run time if applicable	continuous
3.2.2 Stagnation pressure	from 0.3 bar to a limit stagnation pressure depending slightly on the Mach number : $Po_{max} < 2.5$ bar
Stagnation temperature	from 287°K to 320°K
3.3 Test section	
3.3.1 Shape of test section	square
3.3.2 Size of test section (width, height, length)	height : 1.770 m width : 1.750 m perforated length : 5.4 m
3.3.3 Type of test section walls: closed, open, slotted, perforated Open area ratio (give range if variable) Slot/hole geometry (e.g., 30-degree slanted holes) Treatment of side wall boundary layer:	vertical solid walls - horizontal perforated walls maximum geometric porosity : 6 % - possibility of changing the porosity with sliding plates sixty degree inclined holes (diameter : 18 mm)
Full span models	no treatment
Half-model testing	B.L. diverter
3.4 Flow field (empty test section)	
3.4.1 Reference static pressure	on the vertical wall, 2.685 m upstream of the balance axis
Flow angularity	unknown
3.4.3 Mach Number distribution	$\Delta M/\text{meter}$, in x-direction = $\pm 3 \times 10^{-3}/\text{m}$ for $0.7 < M \leq 0.92$
3.4.4 Pressure gradient	according to 3.4.3
3.4.5 Turbulence/noise level	velocity turbulence : 0.2 % - ref. 1
3.4.6 Side wall boundary layer	displacement thickness : $\delta_1 = 12$ to 18 mm boundary layer thickness : $\delta = 90$ to 170 mm
3.5 Freestream Mach number (or velocity)	
3.5.1 Range	from $Mo = 0.1$ to 1.35
3.5.2 Pressures used to determine Mach number (e.g. settling chamber total pressure and plenum chamber pressure)	settling chamber total pressure and static pressure on the vertical wall
3.5.3 Accuracy of Mach number determination (ΔM)	$\Delta M = \pm 0.001$
3.5.4 Maximum Mach number variation in x, y, z-direction (empty tunnel ; specify at what Mach number)	see 3.4.3
Maximum variation of flow direction	upwash ~ 0.3 degree (function of the model size)