

Test matrix for spices model wind tunnel test

Wind speed : 65m/s

Angle of attack (α) : -5° to 18°

Side slip (β) : $-5^\circ, 0^\circ, 5^\circ$

S^* (dm^2) : 0, 20, 25, 30, 32/max possible

•Different combination of M - α - β - S^* are possible

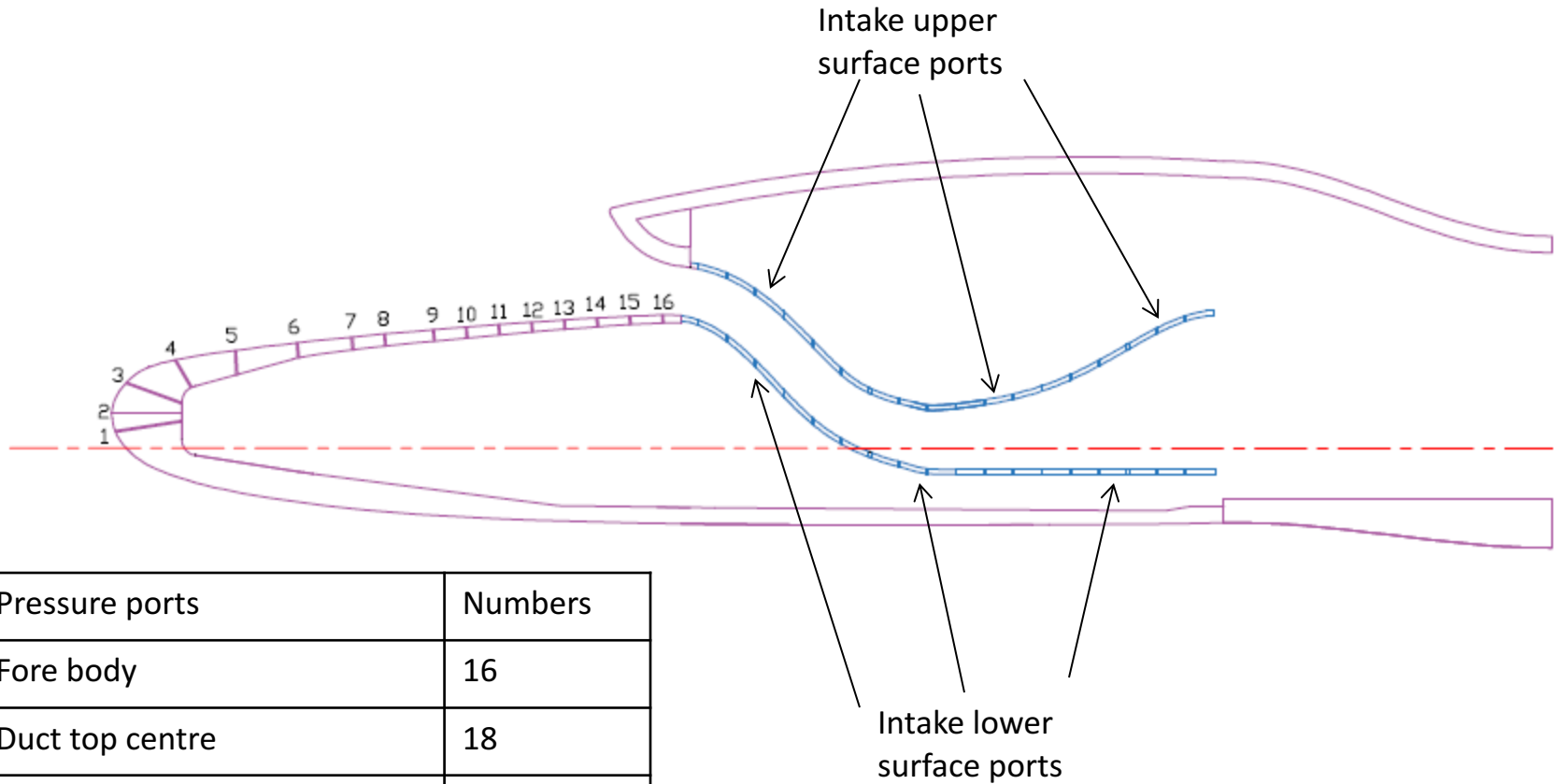
S^* is Sonic area of the internal flow calculated from Mach Number M_3 at compressor face plane or rake

$$S^* = Set_{\text{Rake}} = \frac{1.0 \times 1.728 \times M_3 \times A_3}{(1 + 0.2M_3^2)^3}$$

Where M_3 is Mach number at the internal flow at the compressor face plane or rake

A_3 is cross sectional area of compressor face (Prototype) = $\frac{\pi}{4} D^2$ in dm^2

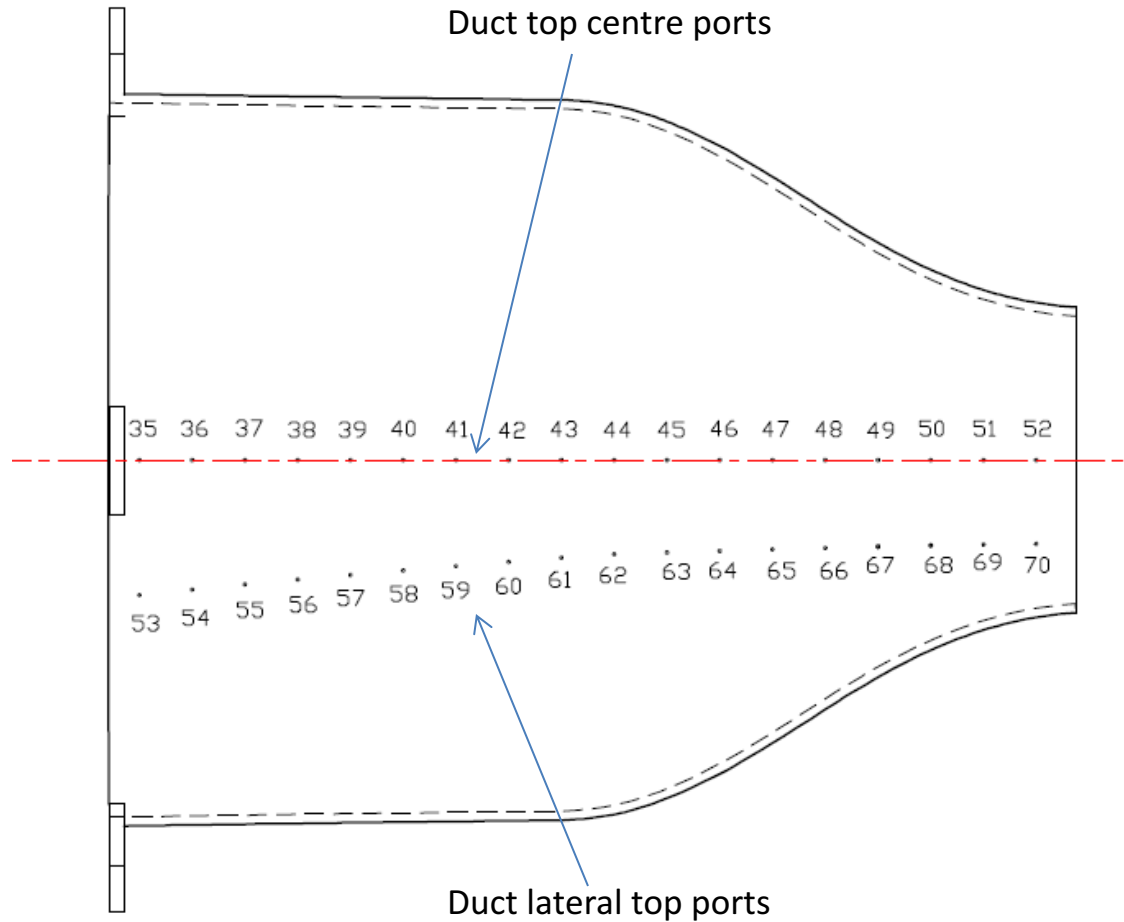
Pressure port location on Forebody along centre line of Spices model



Pressure ports	Numbers
Fore body	16
Duct top centre	18
Duct bottom centre	18
Duct top side	18
Duct bottom side	18
Duct lateral Extreme	18

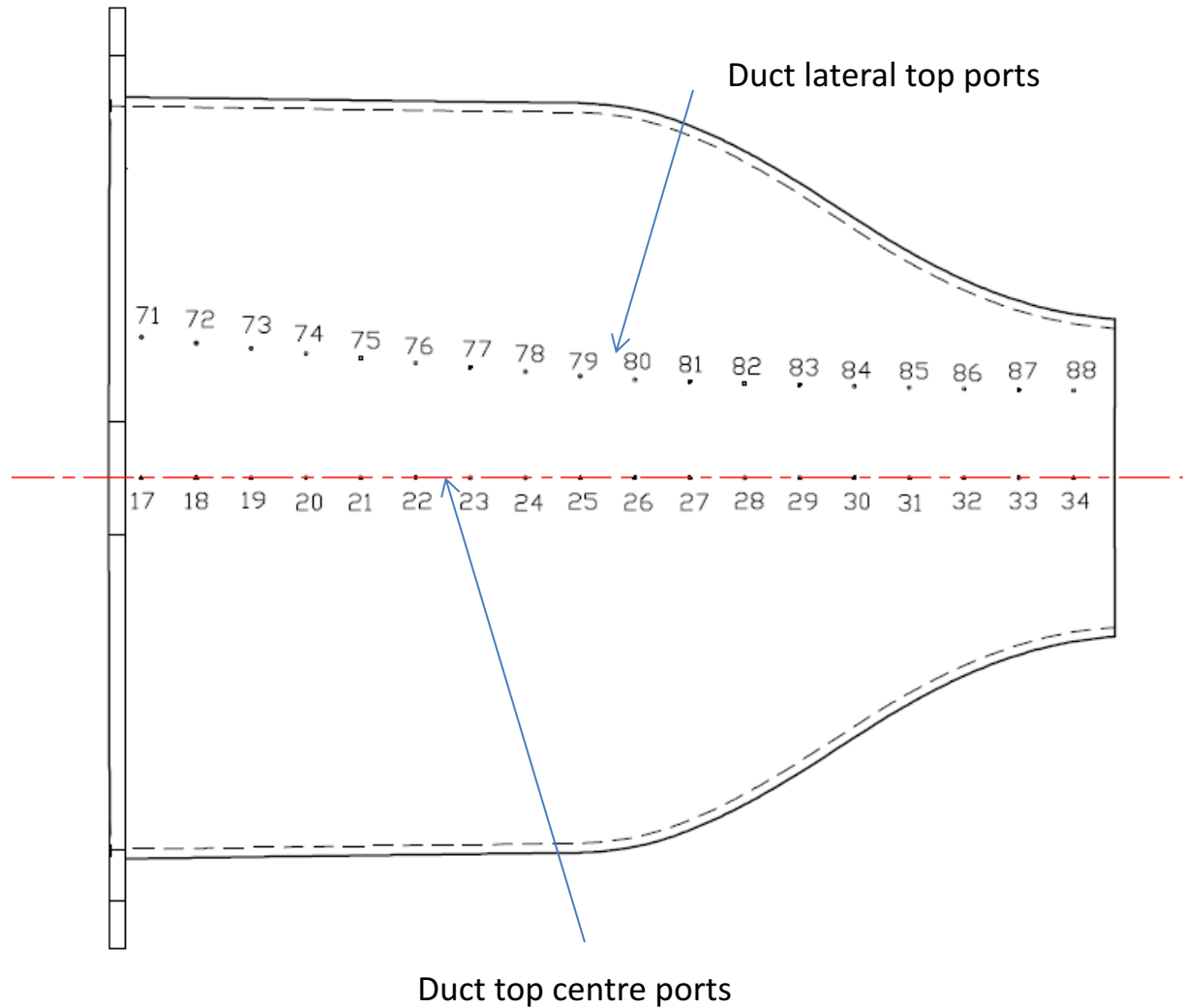
Pressure port location on upper surface of intake duct of Spices model

Top View



Pressure port location on lower surface of intake duct of Spices model

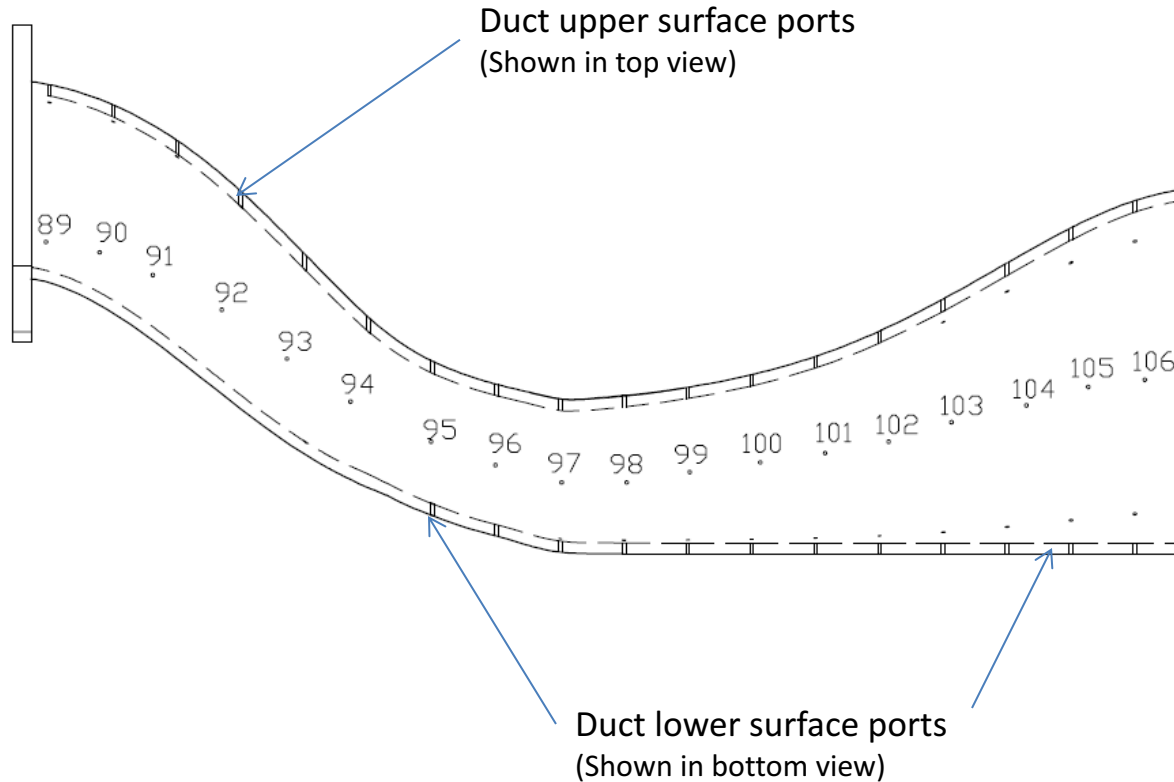
Bottom View



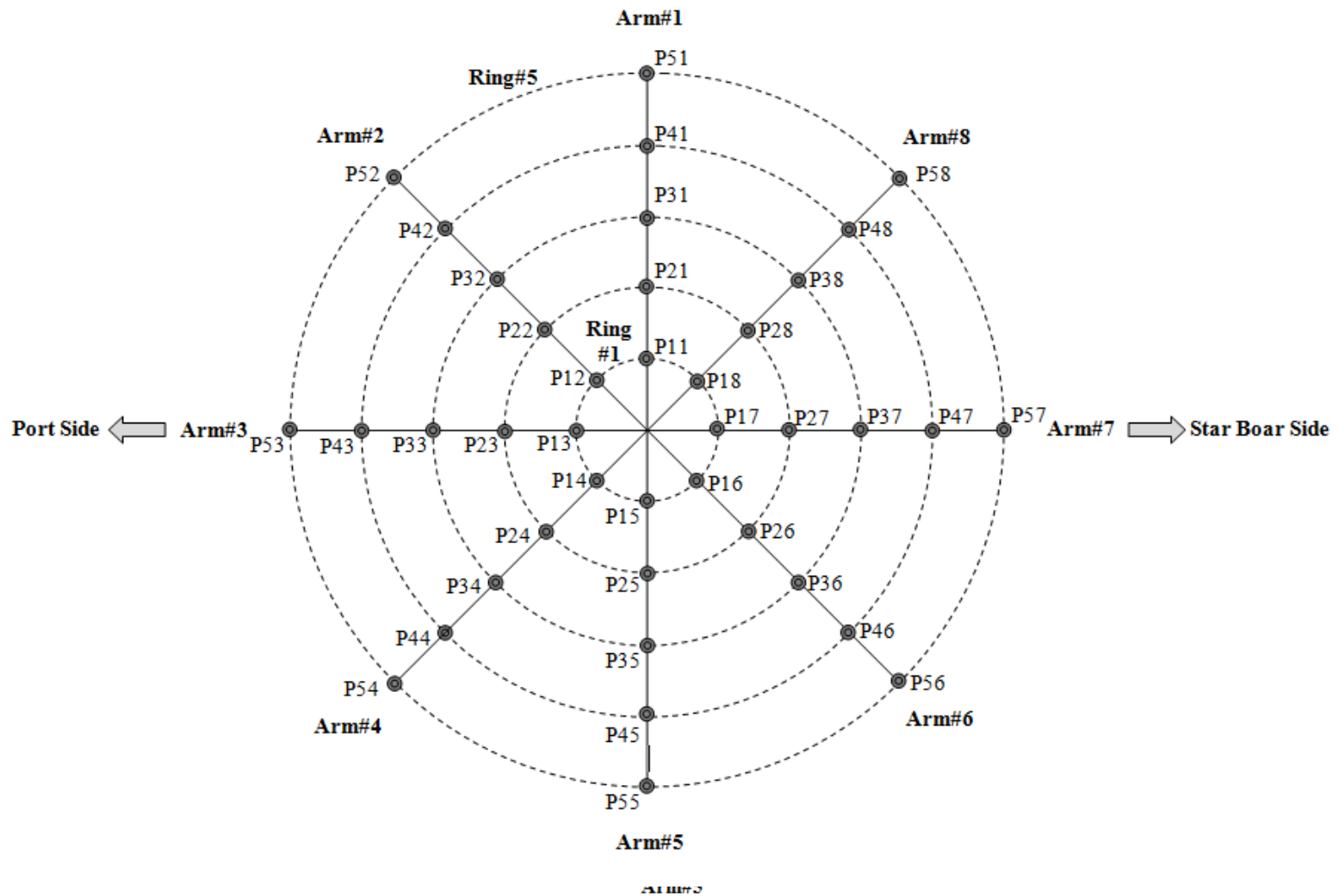
Pressure port location on lateral plane of intake duct of Spices model

Side View

Pressure port location on lateral plane



Location of 40 total pressure ports on distortion rake



Location of static pressure ports on engine face of splices model

