। जमर-ते।



What is Mach number?

- This is dimensionless number.
- It is ratio of speed of the aircraft to local speed of sound.
- It is denoted by 'M'.
- $m = \frac{V}{a}$
- It has No Unit
- Where v is speed of the aircraft in m/s
- a is speed of sound at ambient temperature in m/s.
- Speed of sound is $\alpha = \sqrt{\gamma R T}$
- γ is adabatic constant = 1.4
- T is static / ambient temperature in Kelvin

Types of Mach Number

Mach Number	Range
Low subsonic	0 to 0.3
Subsonic	0.3 to 0.8
Transonic	0.8 to 1.2
Sonic	1
Supersonic	1.2 to 5
Hypersonic	5 & Above





धन्यवद

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