

```
function v_stall = stall_velocity(aircraft,h)
% STALL_VELOCITY Computes the stall velocity below which, lift
% becomes less than weight.
% Inputs are:
% aircraft :a struct aircraft data in SI
% h        :a numeric array of Mx1 aircraft altitude in m
%
% Output is:
% v_stall  :a numeric array of Mx1 stall velocity in m/s

arguments
    aircraft {mustBeA(aircraft,"struct")}
    h (:,1) {mustBeNumeric, mustBeReal}
end

W = aircraft.W;
S = aircraft.S;
Cl_max = aircraft.Cl_max;

[~,~,rho] = stdatm(h); % atmospheric density at altitude (kg/m^3)

v_stall = sqrt(2.*W./(rho.*S.*Cl_max));
end
```