

WHERE MATH AND SCIENCE

TAKE FLIGHT

iFLY MAKES LEARNING
FUN WITH STEM

The Science & Engineering of iFLY



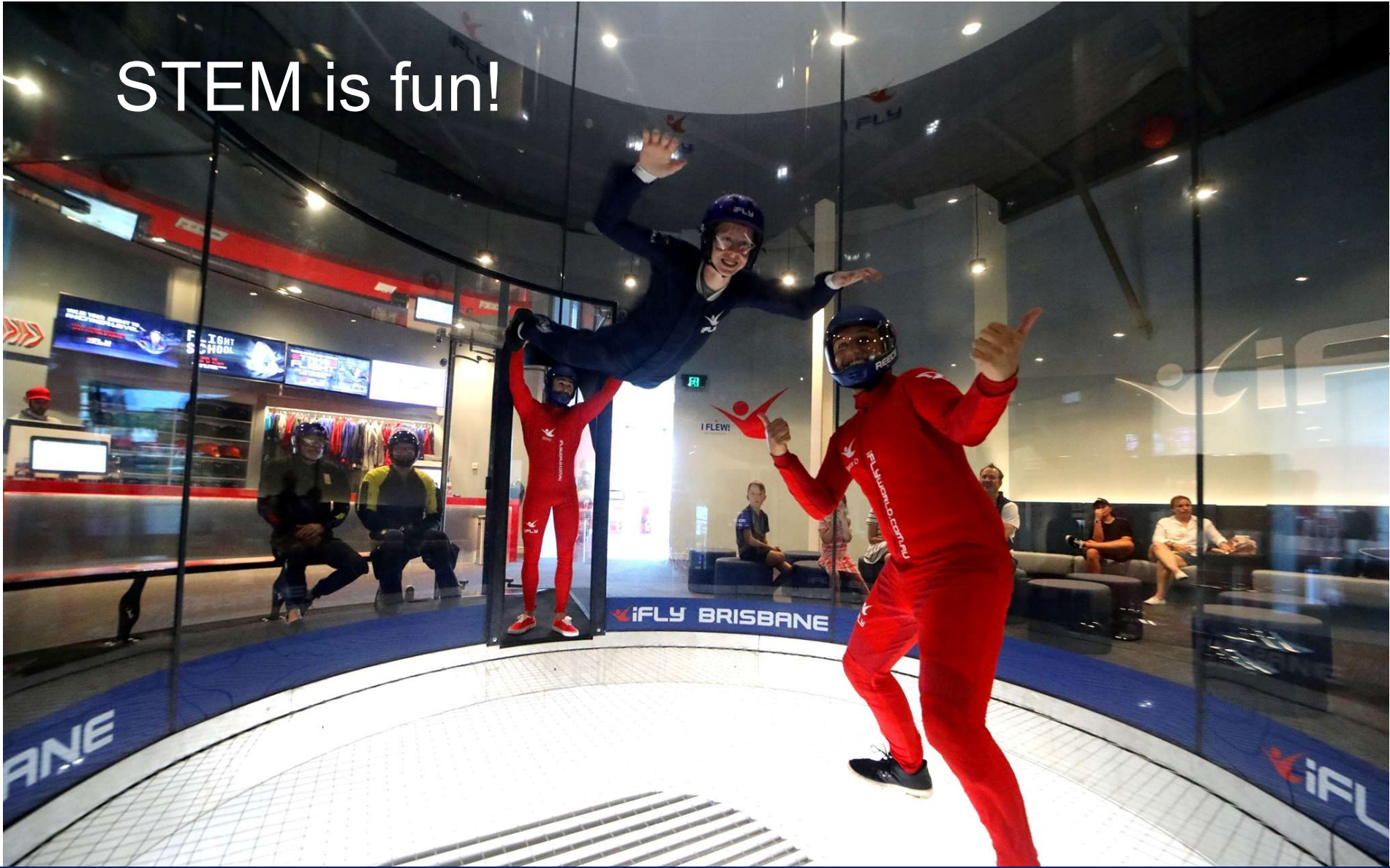
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Exciting futures in STEM await you.

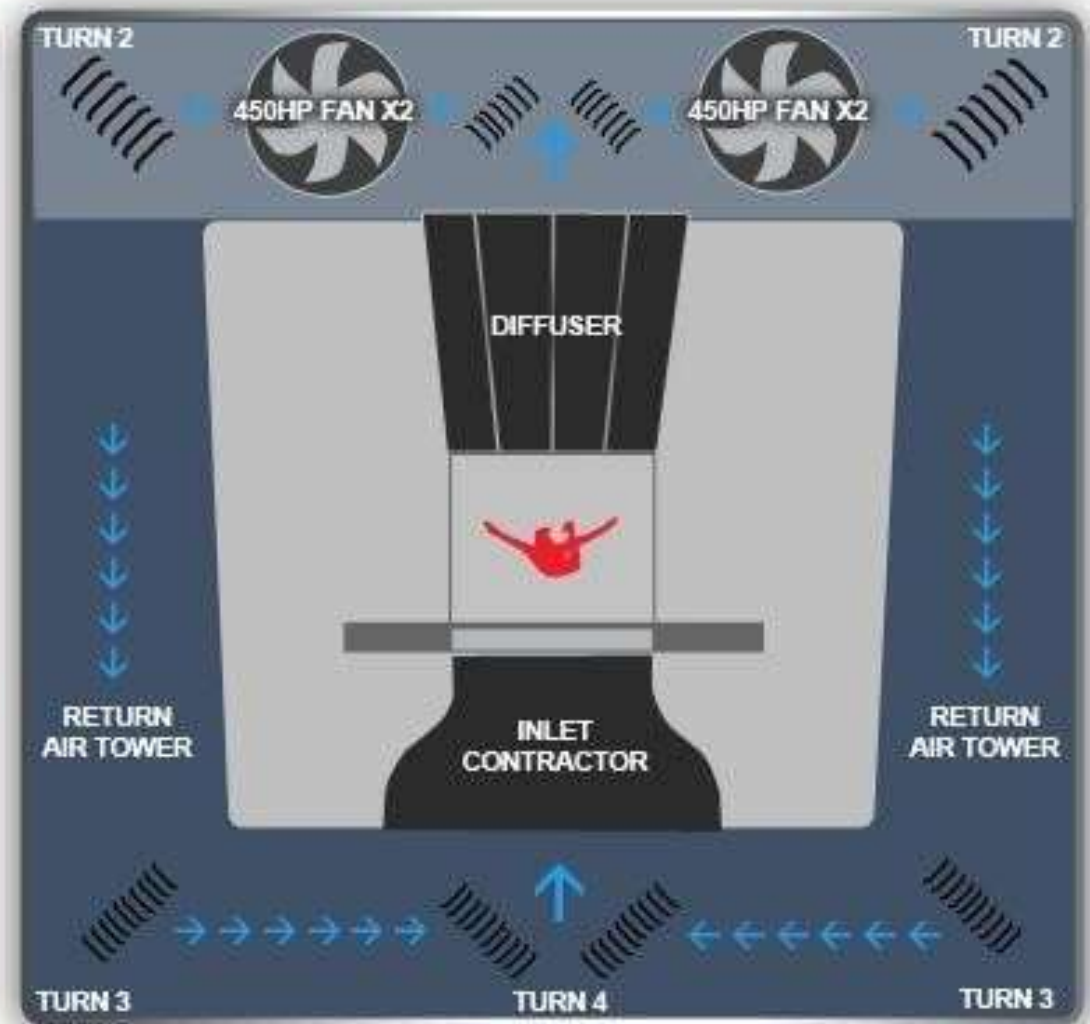




STEM is fun!



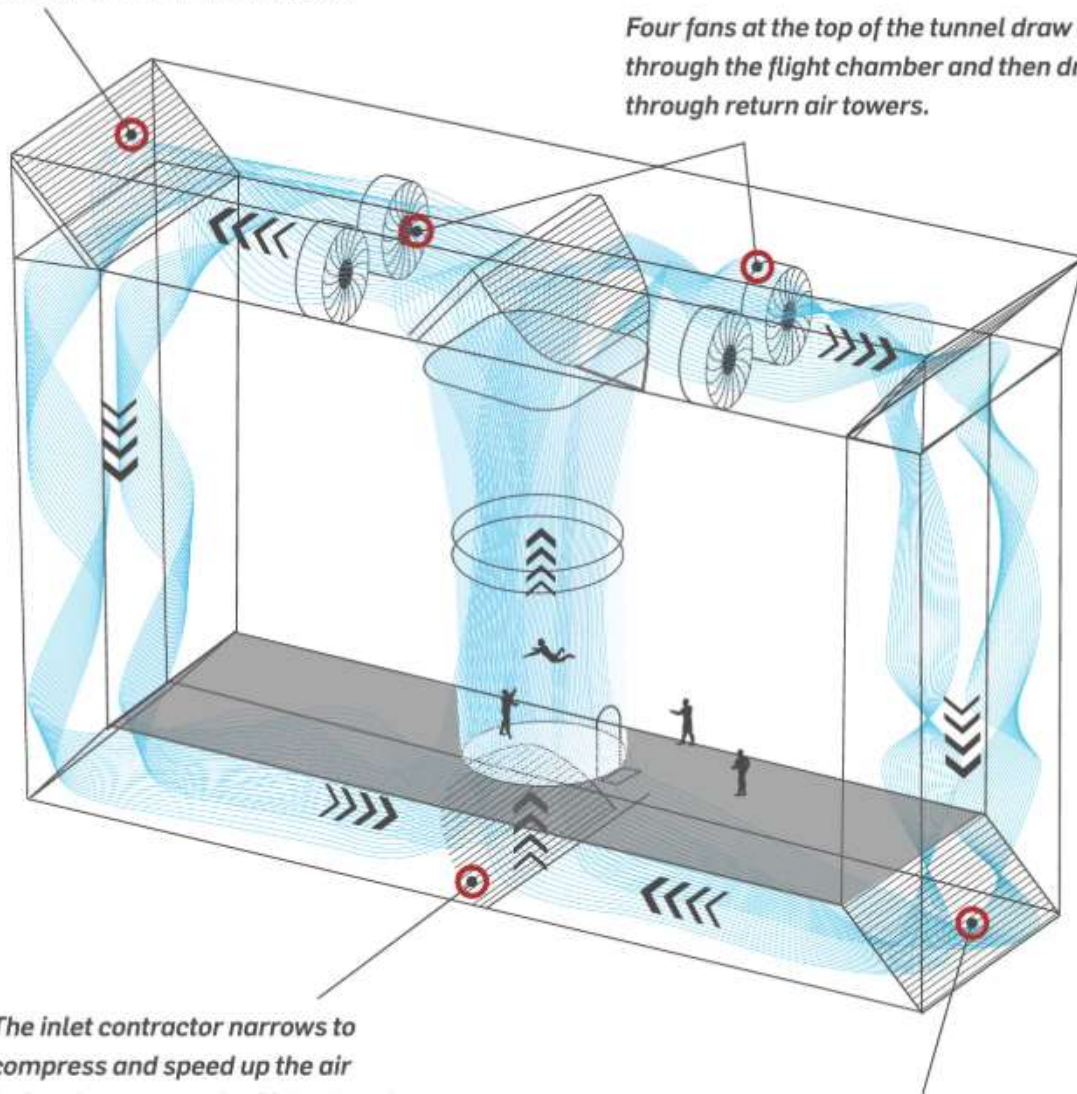
This is a Closed Loop Vertical Wind Tunnel.





*Airfoil shaped turning vanes
in each corner maximize efficiency*

*Four fans at the top of the tunnel draw air
through the flight chamber and then drive it
through return air towers.*



*The inlet contractor narrows to
compress and speed up the air
before it re-enters the flight chamber.*

*Patented water cooled assemblies
provide consistent air conditioning*

How Does All This Work?

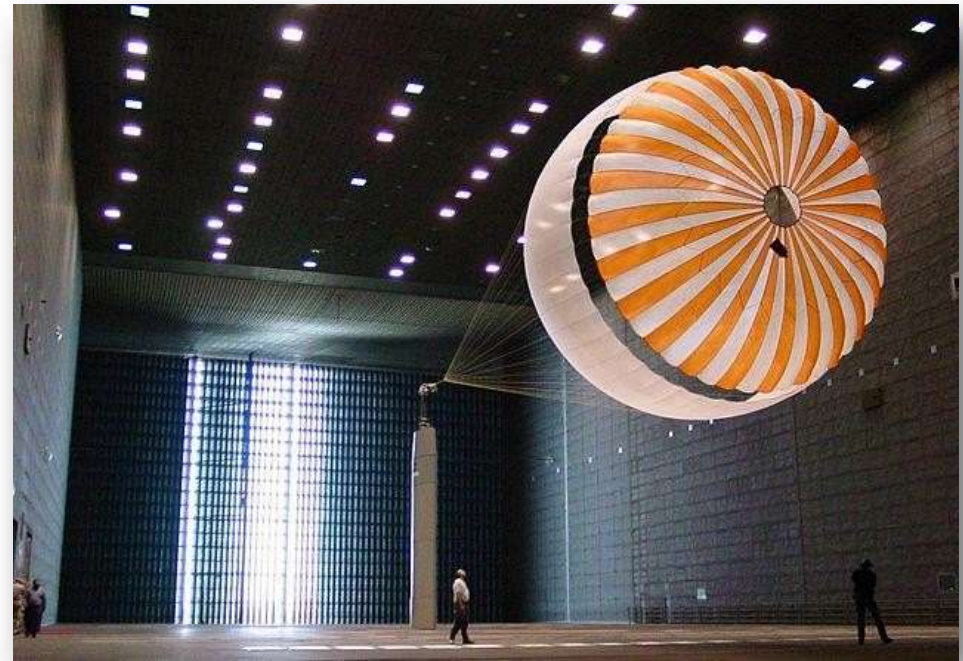
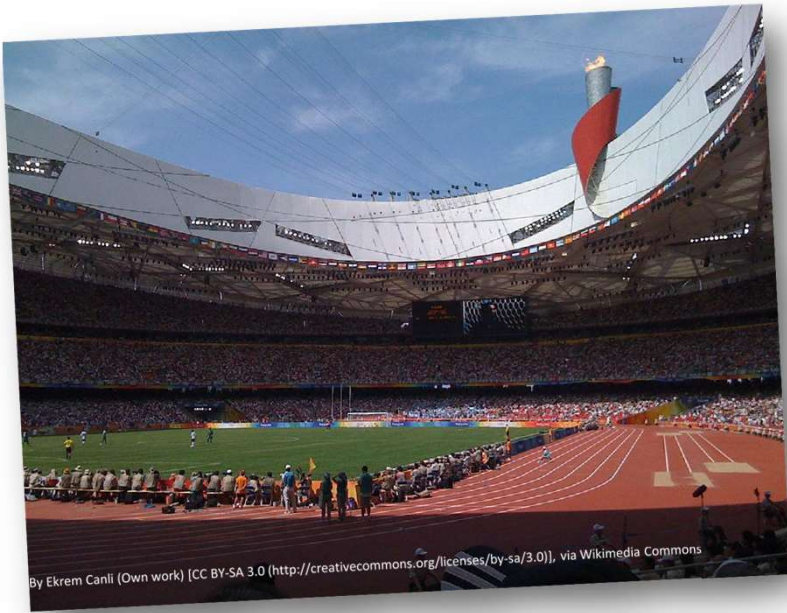
We invented the recirculating wind tunnel for bodyflight and continue to lead its innovation to allow us to deliver the dream of flight to everyone.

Four fans located in the optimal position for flow quality drive the air around a simple and efficient loop.

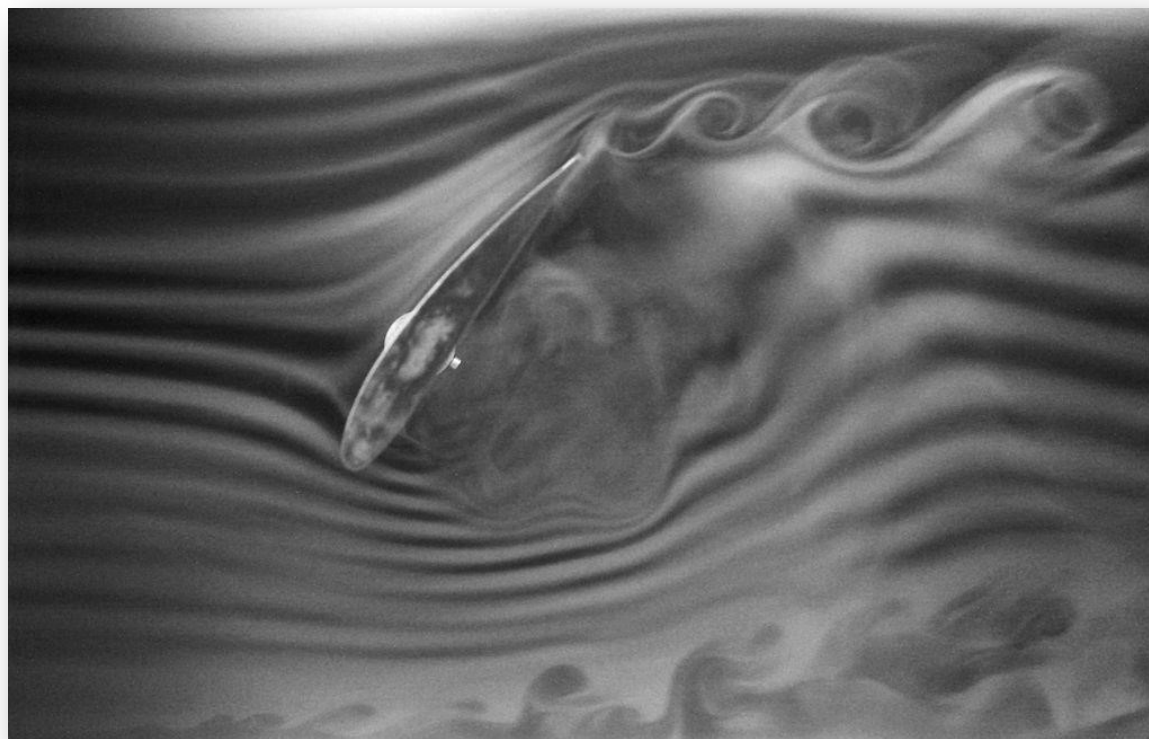
The airflow is narrowed below the flying chamber to speed and smooth the flow for maximum enjoyment.

Wind tunnel testing

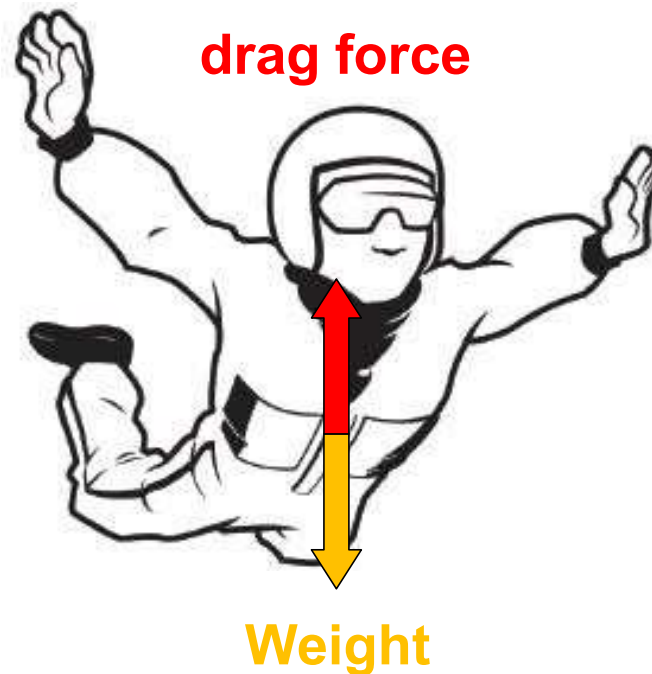




Air
is a
fluid.

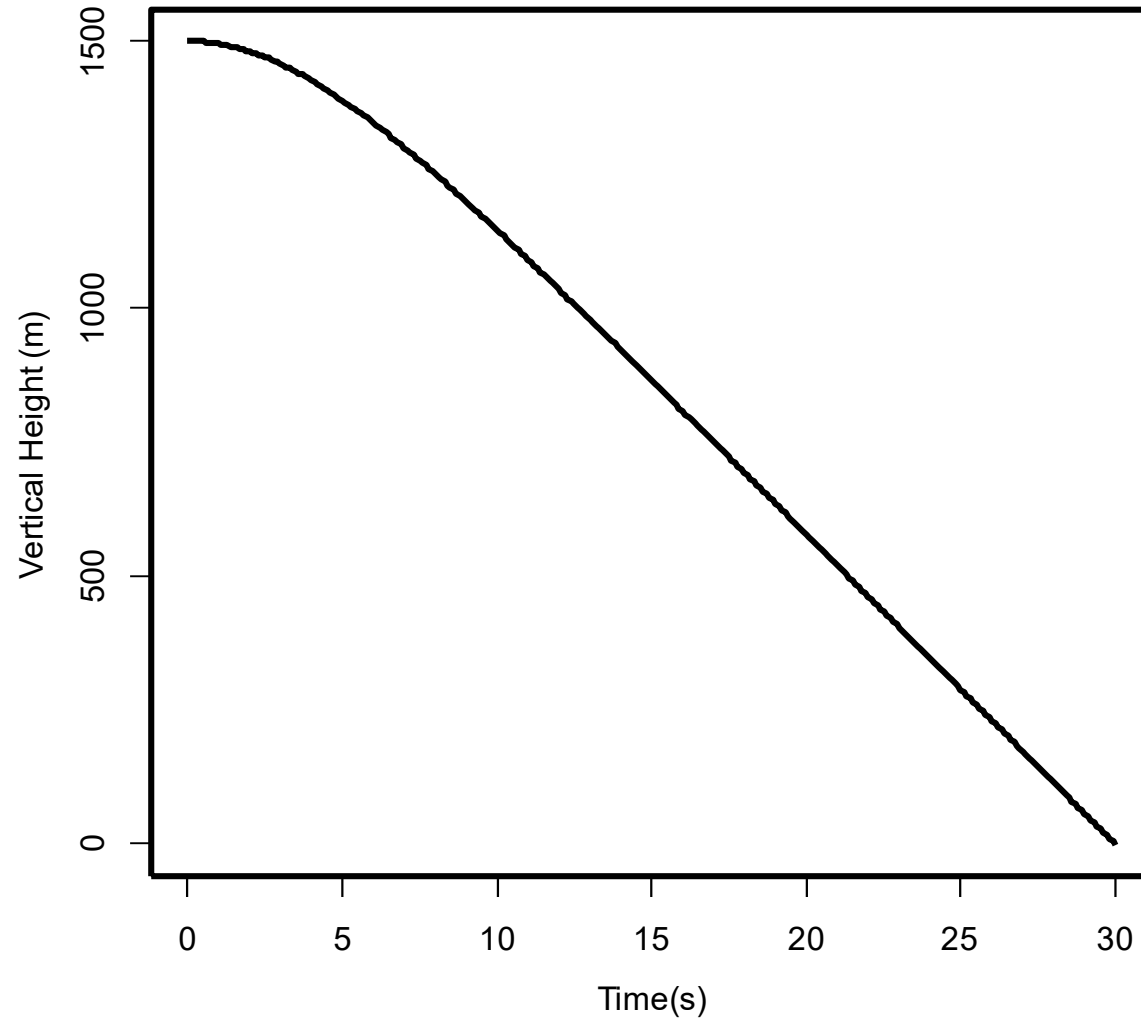


What forces are acting upon a sky diver in the tunnel?

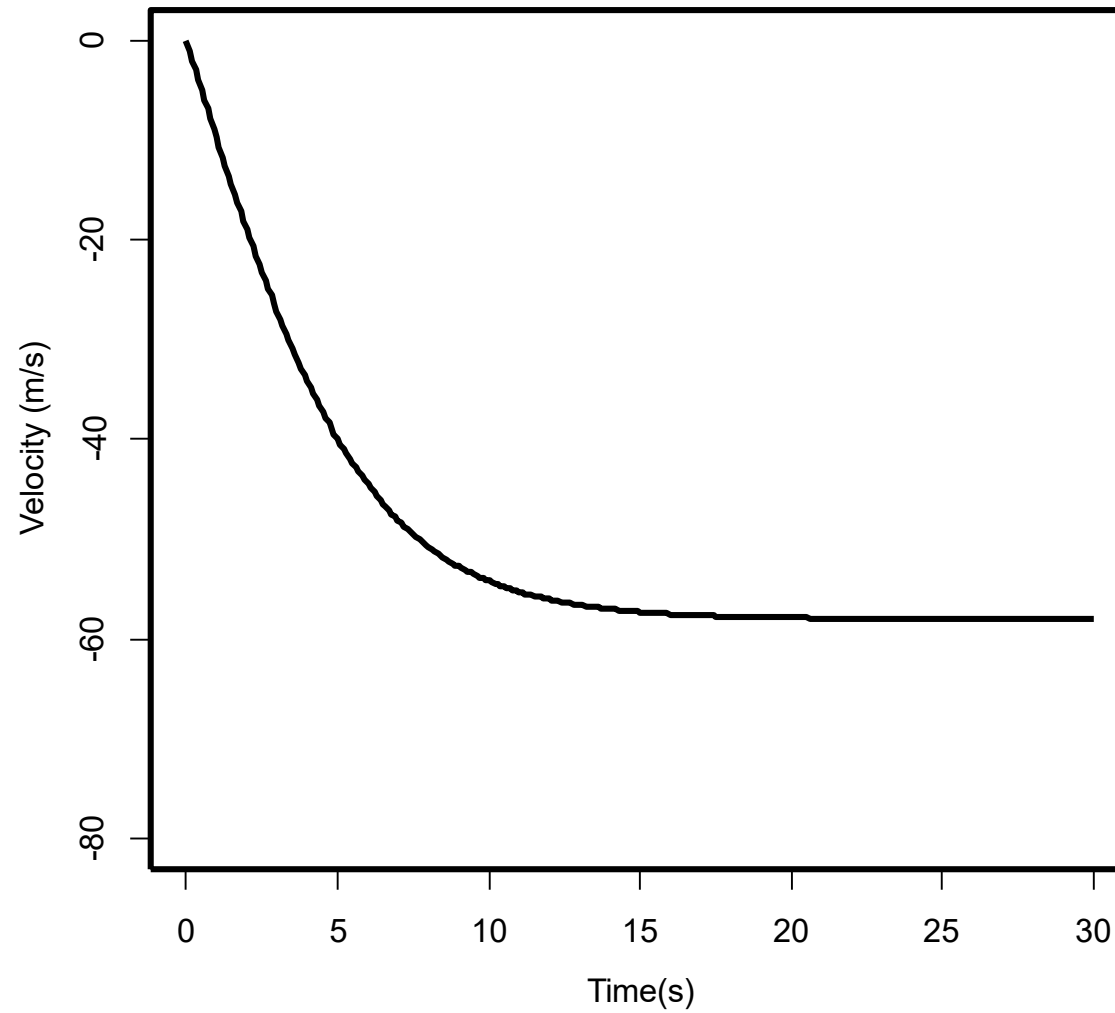




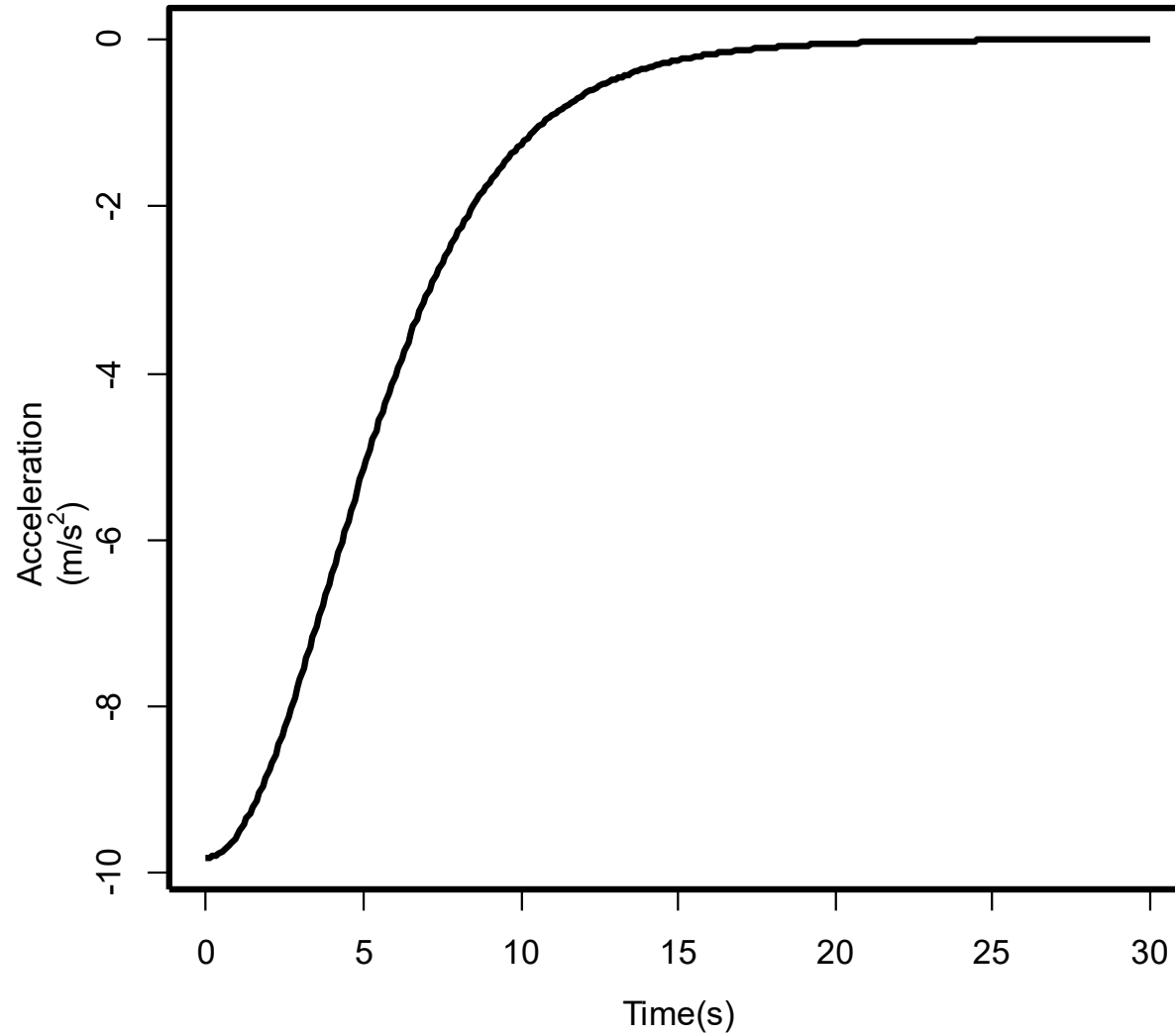
Skydiver's Height When Falling from an Airplane

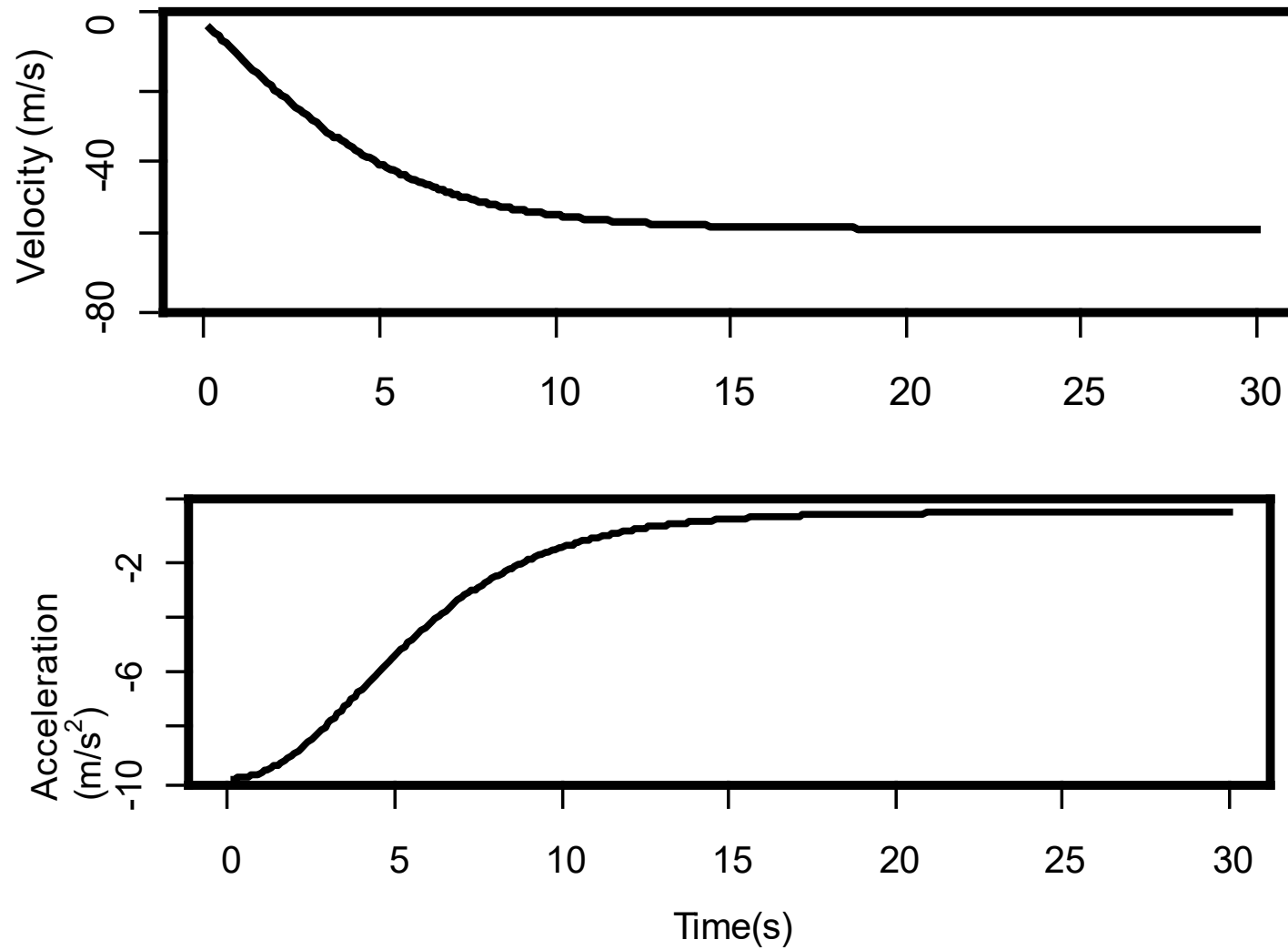


Skydiver's Velocity When Falling from an Airplane



Skydiver's Acceleration When Falling from an Airplane





force of air



gravity

force of air



gravity

When **drag force = gravity**, you reach ***terminal velocity***.

force of air



gravity

force of air



gravity

$$F_W - F_D = ma$$

At terminal velocity:

$$F_W - F_D = 0$$

$$F_W = F_D$$

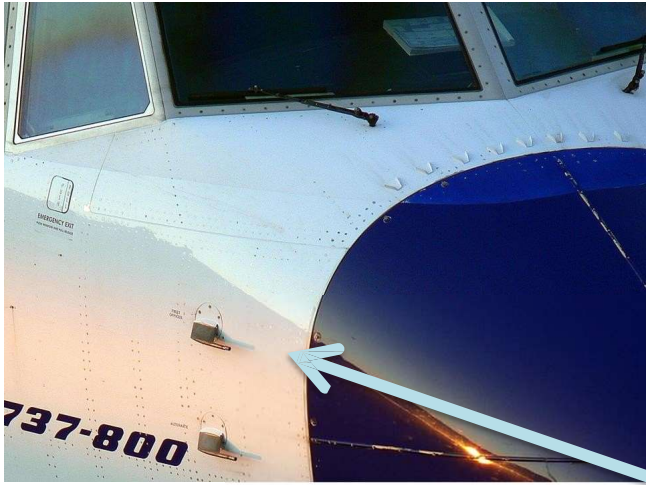


By User Alers on sv.wikipedia - Originally from sv.wikipedia

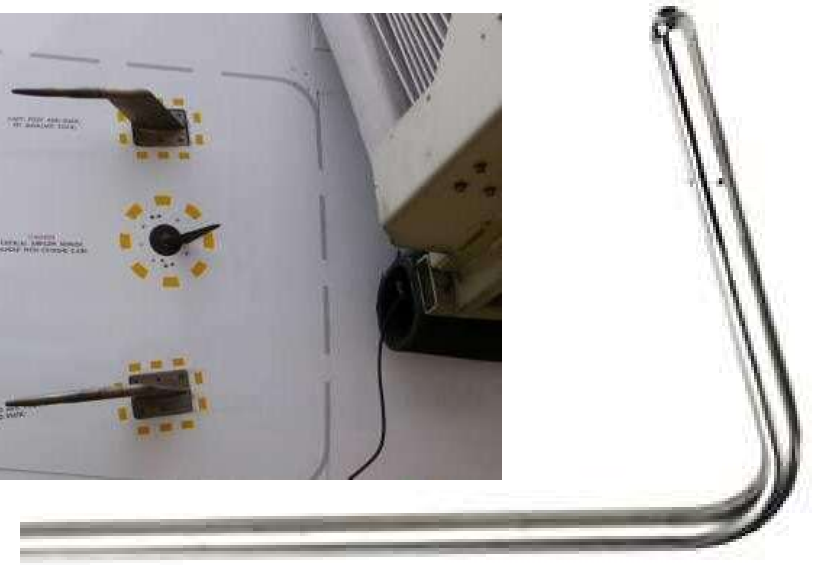
A larger
frontal area
decreases
your **velocity**.

How do we know the air speed?

...we measure it...



...with a Pitot Static Tube.



Can you find them in our wind tunnel?

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iFLY | INDOOR SKYDIVING



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