

# Bernouli's Theorem



**Daniel Bernoulli**  
(1700-1782)

first described Bernoulli's Theorem:

- A decrease in flow shows an increase in pressure
- An increase in flow shows a decrease in pressure

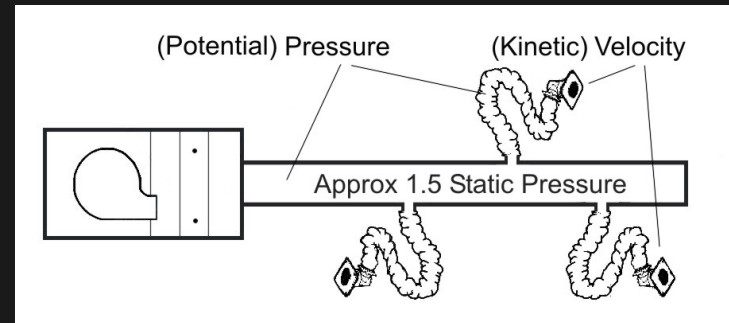


**Giovanni Battista Venturi**  
(1746-1822)

first described The Venturi Effect:

- **Flow = velocity x area**

The Venturi Effect is an increase of velocity in a fluid stream when constricted to a smaller channel.



The potential energy (static pressure) given over to the air via the fan motor is converted to kinetic energy (velocity pressure) as it is released through the attenuated mini-duct. As energy can neither be created or destroyed, only changed in state, the increase in kinetic energy (velocity) means a reduction in potential energy (static).

By controlling the air velocity through the attenuated mini duct (The Venturi Effect) the static pressure of the treated air is reduced to below that of the room air (Bernoulli's Theorem). Room air is thus drawn slowly towards the low-pressure area of the outlet where it mixes with the treated air. In this way the cooling/heating effect is introduced throughout the conditioned space without draughts.

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