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HOW AN AIR CURTAIN WORKS AS A THERMAL BARRIER?

The Door or Shutter opens, if there is a thermal air temperature difference on both sides. The exchange of air starts, as seen in CFD Analysis diagram in Fig 3. Since the colder air is denser, it settles down and hot air rises up, since it is lighter. Now the cold

10 Seconds after freezer door opens with Air Curtain OFF

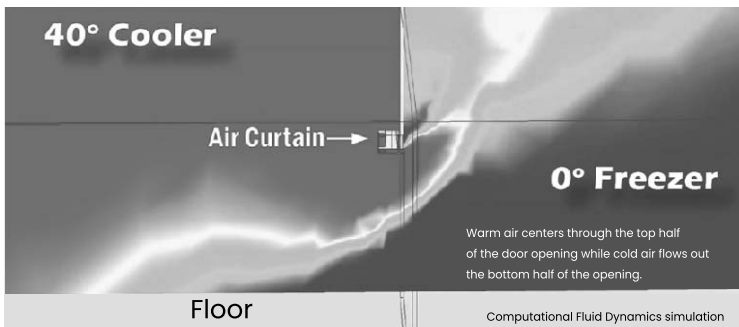


Fig. 3

air tries to move out from the bottom of the door and hot air moves towards the colder side from the top of the door.

This continuous exchange of air leads to heavy energy loss. Thus when the Air Curtain starts, as shown in CFD analysis diagram in Fig 4. It blows the air from top to bottom and creates an air wall along the width of the door, thus separating two different thermal conditions and acts like a barrier.

This leads to saving of conditioned air and inhibits the entry of dust, mosquitoes and flies.

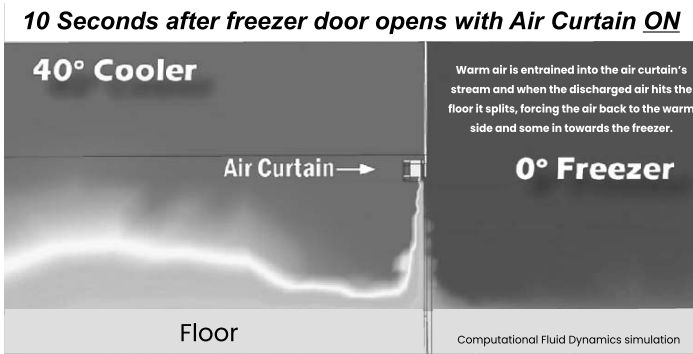


Fig. 4

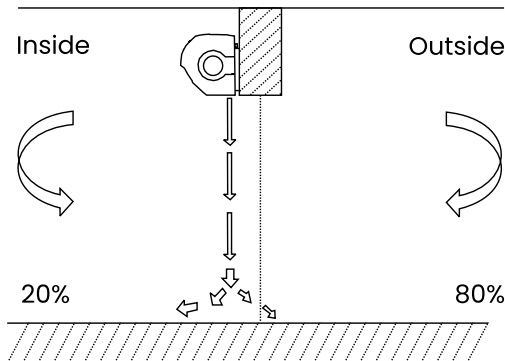


Fig.5