

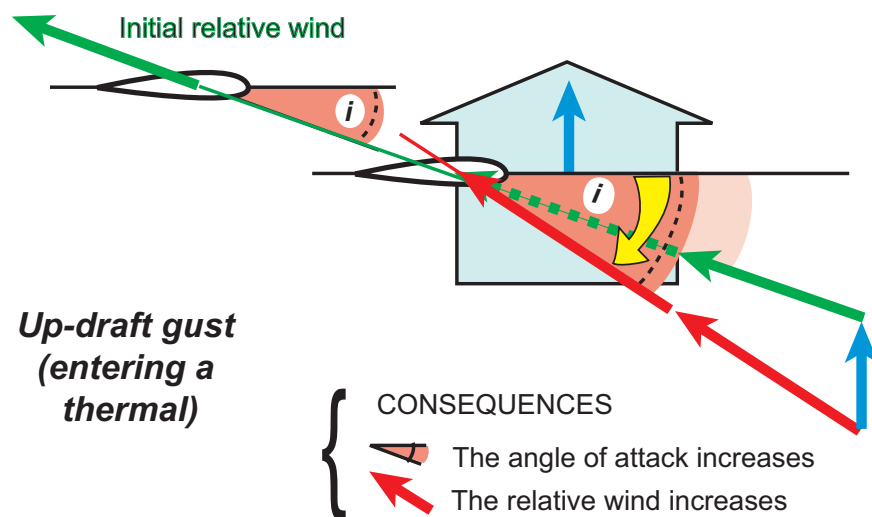
# - Gusts -

## Instant effects of gusts over the angle of attack and air speed (Blue level)

### Méchanics and flying technique

Keep in mind the transitory aspect of the phenomenon. The immediate consequences concerning angle of attack and speed are confirmed by the pilot's feeling.

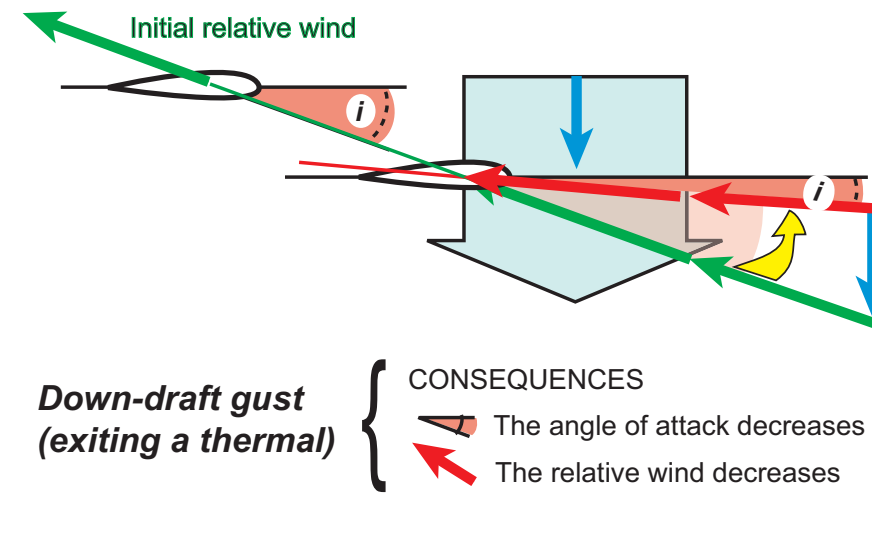
#### Up-draft gust



- Tension in the brake handles harden
- Sound of the wind in the ears increases
- Pilot feels heavier (positive G-force)

After piloting a possible pendulum motion, the pilot can slow down it's glider to optimise the flight, in an up-lift motion or he can «handle» the glider to avoid possible turbulence consequences.

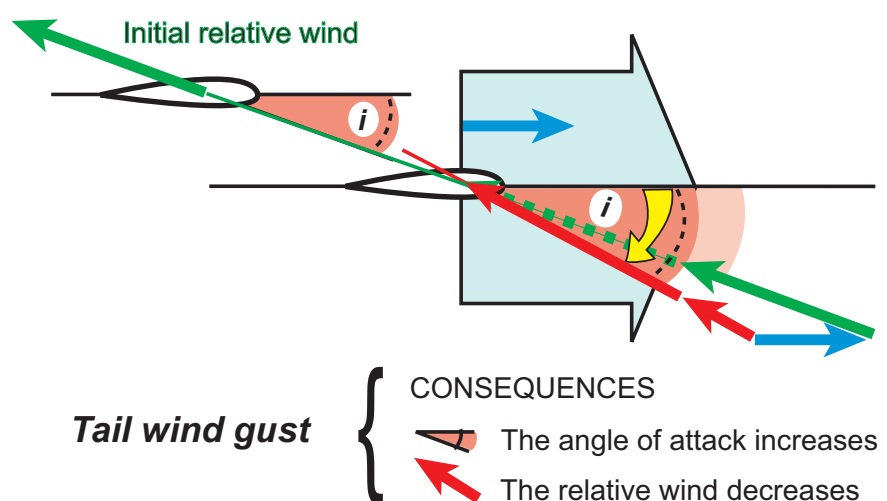
#### Down-draft gust



- Tension in the brake handles soften
- Sound of the wind in the ears decreases
- Pilot feels lighter, falling sensation (G-force value less than 1)

After holding a possible nose diving, the pilot has to let the glider regain some of the missing air speed it needs. He has to rise his hands even if this worsen the glide path.

#### Tailwind gust

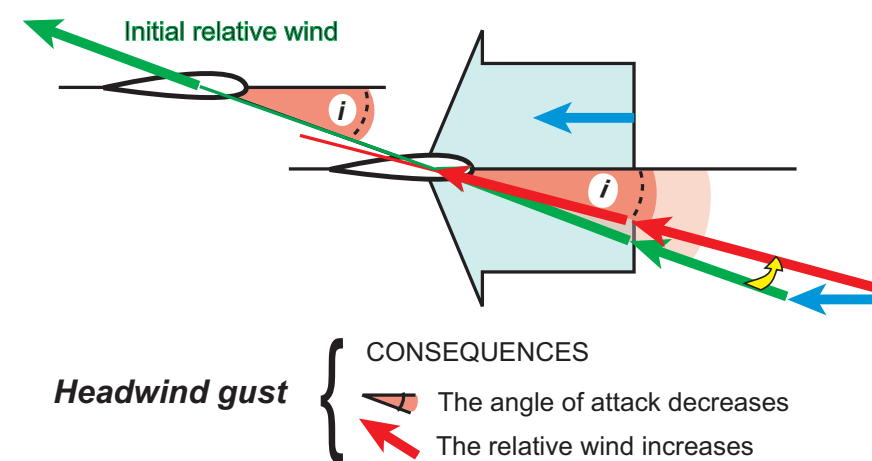


- Tension in the brake handles soften
- No more sound of the wind in the ears
- Weightlessness feeling (Negative G-force)

After experiencing a downward trajectory motion, and shortly stopping a potential nose-dive, the pilot must agree to get some speed back. If he's close to ground, while in final, it's a kind of wind gradient which can requires to begin the braking higher and sooner.

Risk is seriously reduced if the pilot begin the final with some speed. Otherwise, stall can occur, specially when attempting to flare.

#### Headwind gust



- Tension in the brake handles can harden or soften depending of the gust strength and of the new angle of attack
- Sound of the wind in the ears increaes seriously
- The feeling changes considering gust strength and angle of attack
- The ground glide ratio deteriorates temporarily

The pilot may have to manage a potential tilting and nose-down pendulum movement.

Explanation of illustrations : When adding the relative wind to the gust → , we obtain the new relative wind ← and the new angle of attack ∠