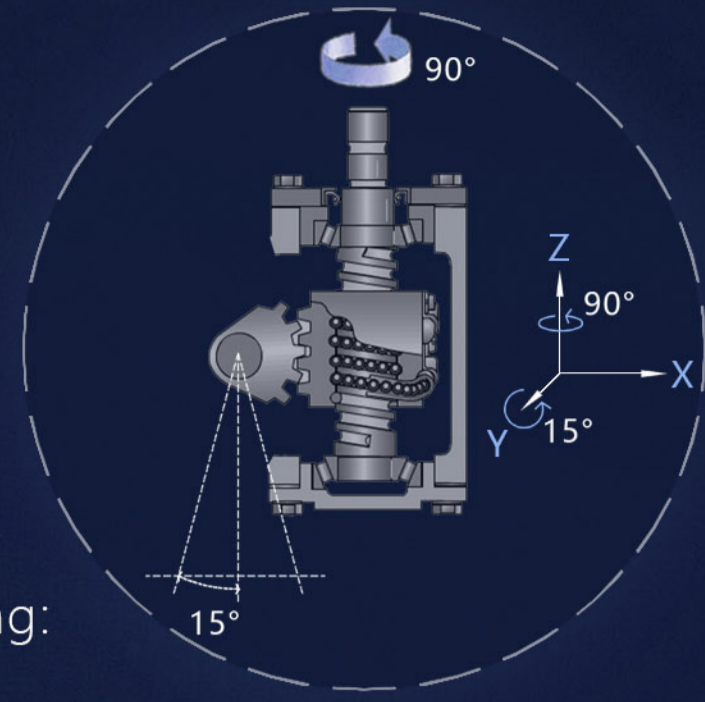


Mechanical Principles



Recirculating Ball Steering:

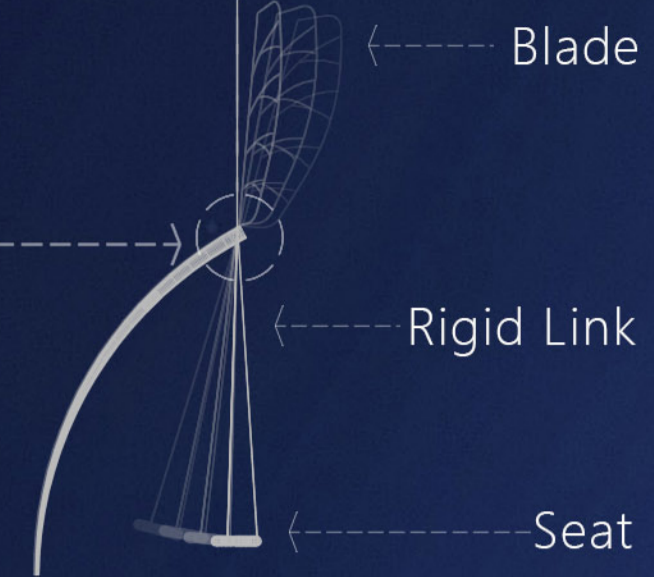
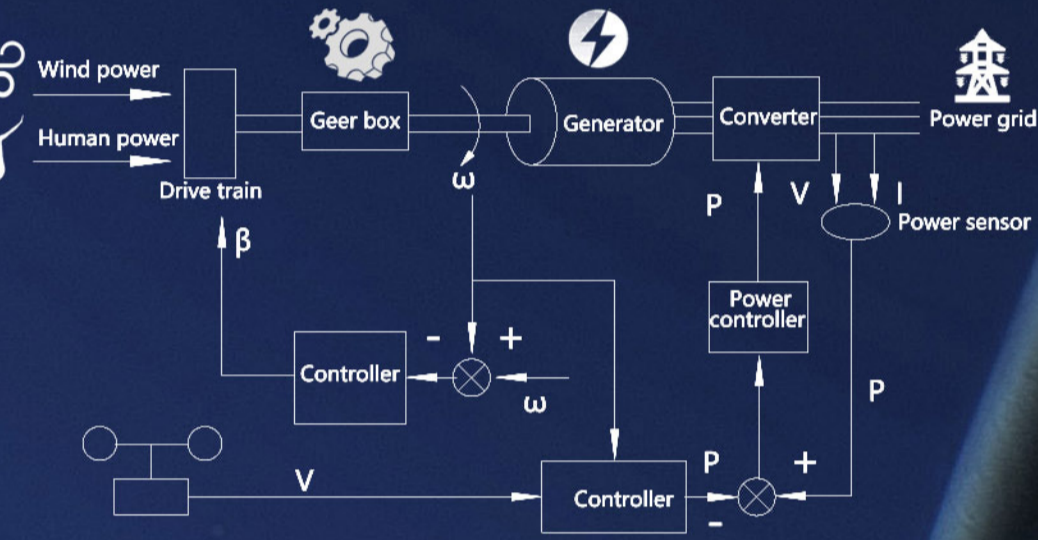
'Recirculating ball steering' is widely used in automobile industry. It can change the direction of rotation.

When the seat swings 15 degrees on y-axis, the 'recirculating ball steering' system let the blade make a 90 degree turn on z-axis.

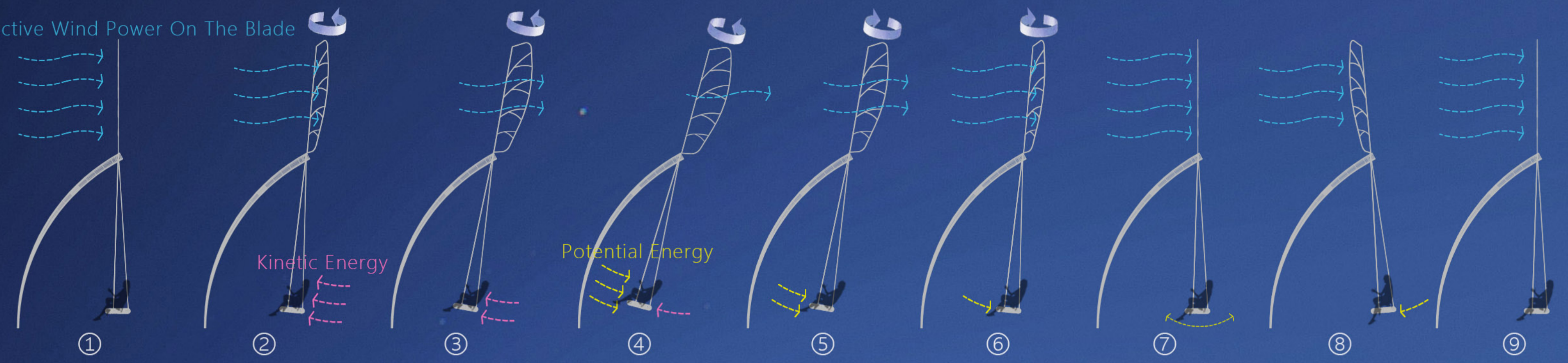
This can reduce wind pressure, so the seat can swing back smoothly.

At the same time, the rotating shaft drives the generator.

Power generation schematic diagram:



Effective Wind Power On The Blade



1. The blade is perpendicular to the wind direction.
2. Wind blows and the wind blade rotates with the wind. At the same time, the seat is pride up by the rigid link.
3. Kinetic energy decreases, meanwhile, potential energy increases.
4. The blade is parallel to the wind direction. Effective wind power reduces to the lowest. The potential energy increases to the maximum.
5. With the effect of potential energy, the seat begins to swing back. At this time the blade is parallel to the wind, so the resistance of the wind is small.
6. When the seat swings to the lowest point, the blade turns back and rereceives more wind power again.
7. The seat moves forward because of its inertia.
8. Swings up a little, and then swings back.
9. Back to the initial.

