Stichting Wind Energie Events

Rules for Racing Aeolus 2026

Status: final

Version: 26.2
MAR 2026

WIND ENERGY EVENTS

19 – 21 AUGUST 2026
HELDERSE ZEEDIJK
www.RACINGAEOLUS.org

Introduction

This document describes the rules for Racing Aeolus 2026 in Den Helder, The Netherlands. This version replaces all prior versions.

Changes to the 2025 final release:

5.9	Changed	8.9	New
5.16	New	9.5	Clarified
5.21	New	11.9	New
Text in blue: Content unchanged but relocated, rearranged or rephrased			

Please note that minor wording changes are not highlighted in the text.

If any questions occur, please contact the appropriate email address listed below. Please submit the documentation requested in chapter 2 to all persons listed below:

- board@racingaeolus.org (general information, organizational, registration, etc.)
- rules@racingaeolus.org (rules, technical questions, technical report, etc.)

Abbreviations

WPV	wind powered vehicle
SOC	state of charge
ROPS	rotor overspeed protection system
Wach number*	$\frac{avg.carspeed}{avg.windspeed}$ with $avg.carspeed = \frac{racedistance}{chargingtime+racetime}$
Wind speed	unless otherwise specified always refers to the velocity of the wind over ground

Contents

*Named after Gustav Winkler, one of the contemporary WPV pioneers

1. The Event

The idea of Racing Aeolus is to develop and build cars (WPV) that can generate energy from the wind as they drive against the wind and compete with other teams from across the globe. These rules give a basic framework to ensure the fairness and safety of the event while being as loose as possible to maintain room for innovation.

While developing your car keep in mind that fairness and sportsmanship are the backbone of this event. Come up with new ideas but do not twist the rules to generate an unfair advantage. If you are not sure about the details of a specific rule please come forward. The decision on how the rules are to be interpreted lies within the Racing Aeolus community which is represented by the captains meeting during the race. However, and especially on safety issues the organizing committee has the final decision.

In order to be successful in the race a car has to be:

- Safe: Poses no threat to the driver or bystanders
- Efficient: Highest possible wach number
- Sturdy: Can race multiple times on several days

There are four different competitions during the event:

1. Endurance: Teams compete for the highest average wach number in multiple races on several days.
2. Fastest Run: Only the fastest run of a car (wach number) counts.
3. Innovation Award: Teams need to find creative and new ways to solve the manyfold problems that arise during the design of a WPV.
4. Drag Race: Teams demonstrate their cars ability to self-start and outrun the competition on a short track.

In addition to the winners award in each competition, the Racing Aeolus Cup will be awarded to the team that performs best in all four competitions.

2. Documentation

All documentation must arrive at the organizing committee at least four weeks prior to the race. The documentation contains the following items:

- Innovation poster (one page A4) for the Innovation Award panel and public display during the race
- Technical report according to the template.
- In case of an electrical storage within the drivetrain: Battery cell type and manufacturer data sheet

The documentation shall be delivered to the email addresses listed in the introduction as PDF files.

3. Definition of a wind powered vehicle

3.1 A land-based vehicle driving on wheels and steered by a driver from inside the vehicle

3.2 Propelled by a device which is powered by the wind and is coupled to the wheels (e.g. mechanical, electrical, ...)

3.3 The storage of energy is allowed. Any storage device must be empty at the start-line (verifiable).
Exception: Batteries for purposes other than the direct production of driving power such as sensors, actuators and communication means can be charged.

4. Driver

4.1 The minimum age of driver is 18 years.

4.2 The minimum weight of driver is 65kg (including protective gear).
If the driver weighs less, extra weight must be added near the driver seat.

4.3 The driver must remain inside the cockpit throughout the whole race.

4.4 The driver must have a radio.
The driver must be in constant radio contact with a team member that is positioned at the lineup area.

5. Design

For a dimensions example see appendix

5.1 The maximum dimensions of the WPV are:
2 meters wide, 4 meters long and 3.5 meters high (competition-box).

5.2 When in racing configuration the car must fit completely into the competition-box.
No parts can be added or removed before or during any race. It must fit including all sensor masts.

5.3 *Stuttgart Super Sucker (2012)*
By turning the tower (yaw) or the wheels (steering) the competition-box may be exceeded.

5.4 The maximum diameter of the rotor including cowling (diffuser) and net is: 2m

5.5 The maximum rotor swept area (facing the wind, relevant for creating torque on the rotor axis) is: $4m^2$

5.6 The maximum distance of any parts that are fixed to the tower (and turn with the tower) from the center of the tower is: 1.5m

5.7 The maximum length of diffuser is: 1m in front and 1m behind the tower centerline/axis

5.8 The maximum turning radius of the car is: 7.5m (15m diameter)

5.9 There must be proper footrests for the driver.
If the drivers foot touches the rough asphalt of the racetrack at high velocities serious injuries can occur.

5.10 The steering system of the car must be: Safe, reliable, precise, sturdy and robust
It must be strong enough to function safely well beyond the expected usage at the race.

5.11 *Cairo Control (2023)*
For steering devices with a rotational driver input (e.g. steering wheel): The required max. turning radius (rule 5.8) must be achievable with max. 2 rotations of the steering wheel.

5.12 The vehicle must have at least 3 wheels which are not in line.

5.13 *Baltic Turbo Tower (2014)*
The driver must have good visibility for the sector from -110 to 110 degrees with the track.
A total of 30° but no more than 10° at once in this sector may be blocked. Obstructive objects thinner than 2mm (e.g. rotor net) are not regarded.

5.14 *Chinook Cover (2019)*
For cars with opaque canopies and a camera/monitor system for the driver the following has to be regarded:

5.14.1 Same visibility sector as stated above: min. 120° displayed field of view.
There can also be side view windows or side view cameras.

5.14.2 There must be no obstructions bigger than 2mm (e.g. rotor net).

5.14.3 There must be a rain shield to avoid water drops on the camera lens (optional for no-rain days).

5.15 *Danish Diffusor Detail (2024)*
The diffusor hast to be fastened in a statically determinate way.
This includes at least 3 fix points along the circumference (e.g. diffusor struts). Each diffusor strut must have at least 3 fix points (e.g. 2 at the rotor hub and one at the diffusor) to avoid forward and aft movement of the diffusor.

5.16 The WPV must have a minimum ground clearance of 50mm.
Refer to the inspection procedure which describes how this will be tested alongside pass/fail criteria.

5.17 Cars without energy storage: There must be no energy storage in the drivetrain.
The drivetrain may be mechanical or electrical. Components of the drivetrain with high inertia are not regarded as storage as long as they are not dis-/engageable, always rotate while the car is running and have a purpose other than storing energy. Small capacitors required in the power electronics of electric drive trains *are not regarded as energy storage.*

5.18 Cars with energy storage: There may be an energy storage in the drivetrain.
The energy storage may be electrical (e.g. capacitors), mechanical (e.g. flywheel) or a combination of both. The transformation between mechanical and electrical energy is allowed.

5.19 Cars with energy storage:
There must be a display which displays the state of charge (SOC) of the energy storage.
The display must be easily readable from the outside. In case of a mixed energy storage (e.g. capacitors and flywheel) there must be a separate SOC-display for each storage. The SOC must be displayed in percent.

5.20 Cars with energy storage: The SOC of every storage must be 0% before every race.

Storage type	**SOC 0% at**
Electrical storage without physically conditioned minimum voltage (e.g. all capacitors except hybrid-capacitors)	Voltage: 0V
Electrical storage with physically conditioned minimum voltage (e.g. batteries)	Minimum allowed voltage according to data sheet
Mechanical storage	No kinetic energy / ambient pressure

5.21 Cars with electric steering (steer-by-wire):

There must be a system that automatically detects when the steering systems fails (e.g. loss of power, broken connection etc.). This system must then automatically trigger the vehicle brakes and rotor brake/ROPS.

To avoid the car turning downhill and running into the sea in case of a single failure in the steer-by-wire system.

6. Safety

6.1 Brakes:

6.1.1 There must be a rotor brake.

- The rotor brake must be on the rotor axis.
- There must be a secondary way of stopping the rotor if the main rotor brake or any system powering the rotor brake fails (e.g. stopping the rotor via the drivetrain).

6.1.2 There must be a vehicle brake.

- The vehicle brake must be on the wheel axis.
- *Baltic Brakes (2016)*
  The vehicle brake must be able to slow the car with a deceleration of at least 6.3m/s^2.
  See inspection procedure 11.4.

6.1.3 Rotor brake and vehicle brake must be independent systems.

6.1.4 There must be a parking brake for the car.
To hold the car in place when there is no driver inside the car.

6.1.5 There must be a parking brake for the rotor.
This can be any design that prevents the rotor from turning freely while the car is parked.

6.2 *Montréal Mighty Mover (2013)*
There must be a rotor overspeed protection system (ROPS) that prevents the rotor from exceeding the maximum design speed.
The ROPS must engage instantly and automatically (no driver action required). The ROPS may either be aerodynamical (no pitch to stall) or mechanical. An electrical system that monitors the rotor speed and automatically activates the rotor brake is recommended. The braking device of the ROPS must be on the rotor axis. For electrical ROPS systems it is recommended to install an emergency ROPS switch on the outside within reach of the pushing person.

6.3 *Flensburger Fingerfeind (2008)*
The rotor (blades) must be contained inside a cage or net.
The rotor net must be made of steel wire of minimum 1 mm thickness or a material which can withstand 600N tension. The cage or net must not rotate.

6.4 The net/cage must be made of squares with a maximum size of 10x10cm.
Other forms than squares are allowed if the gaps in the mesh are not larger than 100cm² and the aspect ratio is smaller than 1.5:1. The net/cage must fit into the competition-box.

6.5 The driver must be able to vacate from inside the WPV without assistance within 10 seconds.

6.6 The driver must not be oriented in a head forward position.

6.7 There must be emergency evacuation markings on the outside of the door(s) or unlocking mechanism.
This only applies if doors/unlocking mechanism are not obvious.

6.8 The driver must be protected in case the WPV flips.
This can be a roll bar or a device with a similar effect.

6.9 The driver must wear a helmet.

6.10 The WPV must be equipped with a clearly audible horn.
The horn must be activated by the driver.

6.11 The WPV must be designed for at least 18m/s wind speed.
The race will be held in up to 12m/s windspeed. Adding 50% for gusts results in 18m/s. Should you plan on driving in these conditions you must design your car to the expected inflow velocity.
Example: 12m/s windspeed + 100% Wach number + 50% gust = 30m/s inflow velocity

6.12 The car must not flip under the following circumstances:

6.12.1 Permanent wind of 18 m/sec from any direction.
The yaw/tower is assumed to be in the worst possible position for the given wind direction.

6.12.2 Driving and turning in any direction on an aslope surface (angle 20°).

6.13 Bare electrical contacts must not be accessible from the outside.
This applies to all voltage levels. Sensor cables must be properly insulated, too.

6.14 WPV with an electrical system with more than 24V:

6.14.1 There must be the international safety symbol "Caution, risk of electric shock" (ISO 3864) on the outside visible from both sides.
The warning sign must be at least 10 by 10cm big, must state the maximum voltage and whether it is AC or DC. The sign must be printed in color.

6.14.2 There must be an emergency switch for the driver that makes the car safe to approach.
The emergency switch must be clearly marked and easily accessible for the driver.

6.14.3 There must be an emergency switch accessible from the outside that makes the car safe to approach.
The switch must be located at the rear of the WPV as far away from the rotor as possible while still being easily accessible. It must not be very close to any uncovered rotating parts. The switch must be clearly marked and labeled "emergency off".

6.14.4 Any electrical parts carrying more than 30V AC or 60V DC must be double insulated from human contact (bystander & driver).
Example solutions: Single insulation plus housing, insulated cable within a conduit, etc.

7. The Endurance Racetrack

7.1 The race should be against the wind.

7.2 The maximum wind speed for the race is 12 m/s on a 10min average.

7.3 The race will not take place in heavy rain or storm. It may take place in rain.

7.4 The track length is 500m. It may be reduced to 250m on low wind days.

7.5 The track may not be completely straight.

7.6 A race may be canceled by the start marshal if the car comes to a complete standstill and is unable to restart within 10 seconds. If the car cannot restart within this timeframe it has to vacate the track immediately.

7.7 If a car is very slow (below wach 0.30) the start marshal may decide to let the next willing team start. The slow car must drive on the downwind side and let the faster car overtake.

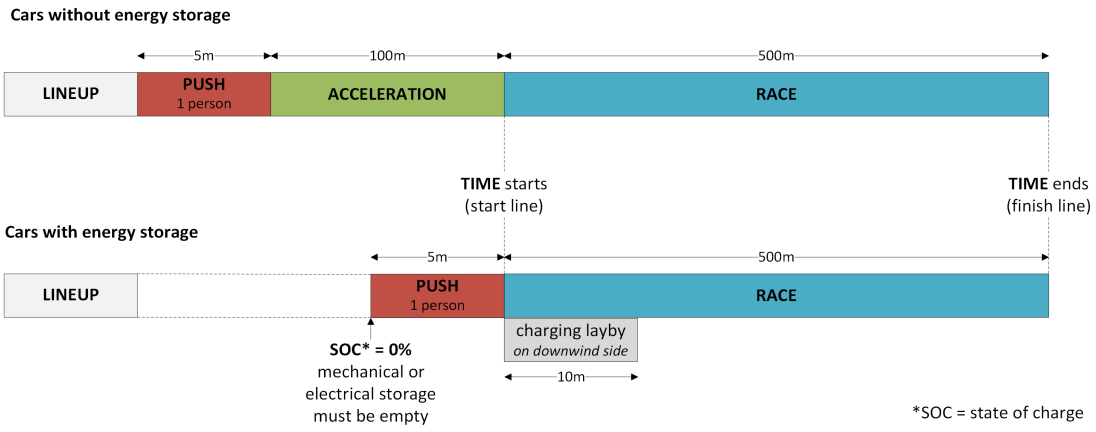
7.8 During the race a team member with radio contact to the driver must be near the start marshal to relay information to the driver (e.g. race aborted, return to start, measurement not working, prepare for overtaking, etc.)

7.9 The start procedure is different for cars with and without energy storage:

- Without energy storage:
  - Total standstill of rotor and car at the start of the pushing zone
  - 5m: Pushing by one person with helmet from behind the WPV to overcome the standstill resistance.
  - 100m: Acceleration to bring the car to an equilibrium state of driving speed. This distance may be reduced in low winds.
  - 500m: Race. For low wind days the racetrack might be reduced to 250m.

The Alkmaar Layby (2014):

- With energy storage:
  - Total standstill of rotor and car 5m before the start line, SOC = 0%, SOC-check by start marshal
  - 5m: Pushing by one person with helmet. Standstill or extremely slow pushing is not permitted. The 5m are not meant to charge the storage but to accelerate the car enough that it can cross the start line and roll to the charging layby.
  - 500m: Race
  - The cars may charge their storage in the marked charging layby which is on the downwind side of the track just after the start line. The charging time will be included in the race duration. The other races continue. When the charging is completed, the team asks the start marshal for clearance to resume the race. The car must not enter the racetrack without clearance by the start marshal.



8. Traffic Rules

The basic idea is that no team will influence the other.

8.1 If you are not racing, keep on the downwind side! Even if you are just taking pictures.

8.2 Upon completion or abortion of the race you must immediately leave the racetrack.
Move the car to the downwind side, off the track and return to the start. Keep on the downwind side as far away from the track as possible. If the wind direction is in line with the track keep on the dyke side, not on the seaside. Make sure you always have enough team members present to quickly push the WPV off the racetrack. Don't block the racetrack!

8.3 Parking/stopping near the finish line is not permitted.

8.4 The start order in the line-up area is first-come-first-serve.

8.5 Once a car is cleared to start it must attempt a run within 30 seconds.
If the car does not start within that timeframe it has to leave the lineup area. It may directly return to the last place of the lineup queue. To streamline the process and avoid constant rearranging of the lineup (e.g. on low wind days) the start marshal may go down the line and offer the next cars the option to "jump the line". Should a team choose to jump the line they are allowed to move to the front of the lineup. They must start within 30sec or return to the end of the lineup.

8.6 If a car stops in the acceleration segment or on the race track it must resume racing within 10 seconds.
Outside help to restart is not permitted (e.g. pushing, nudging the rotor, putting blocks/feet under the wheels to stop the car from rolling backwards, etc.). If you cannot restart within 10sec you must clear the racetrack immediately.

8.7 During every race there must be at least one team member running or biking next to the racing car to help get the car off the track quickly.
This person may be on the racetrack. On high wind days it may not be possible to bike/run next to the car. Teams are encouraged to ensure their car can leave the racetrack or finish zone by placing team members in strategic locations.

8.8 If a car consistently runs at Wach numbers below 30% the start marshal may order it to stay on the downwind side of the track for the whole length of the track.
Other cars might start before the "slow" car finished its race.

8.9 The driver must not move the car by muscle power.
For example: Pushing with feet on the ground, pushing the front wheel, rotate gears by hand, etc.

8.10 Further rules may be set by the event committee during the race.

9. Penalties

9.1 Vehicles that do not comply with all safety rules and mandatory testing must not participate in any race.
If the team manages to change their WPV so that it complies with all safety rules it may participate when cleared by a race official. Upon formal written request by a team the organizing committee may relax a safety rule for this team to allow the team to participate in category D (see 9.3). Special conditions (e.g. analytical verification, limited environmental conditions) will apply.

9.2 Teams that violate any safety rules on purpose will be disqualified with all their cars.

9.3 Vehicles that are unable to meet all the design requirements may participate in the races.
They will not be taken into consideration for any competition. There may be a side competition (category D) if there is more than one car in this category.

9.4 Teams that violate any traffic rule: The best run of the day will be canceled.
At the end of the day the best run of the day be regarded as if it never took place.

9.5 Teams that do not hand in the Innovation Paper for the Innovation Award panel together with a complete technical report in time will get zero points for the Innovation Award.

9.6 Further rules may be set by the event committee and announced to the teams during the race.

10. Mandatory Testing

The following tests must be performed by each team for all their cars prior to the event. Test evidence (description, photographs, results, etc.) must be provided in the technical report:

10.1 Rotor net test
Test a sample of the exact material you intend to use for the rotor net with a weight of 60kg.
Provide photos of the test setup.
PASS/FAIL criteria: The material must not rip or fray.

10.2 Blade weighing
Weigh all the blades you intend to use for the race. Provide exact weights in grams (SI unit) for each individual blade in the technical report. Provide photos of the test setup.

10.3 Blade bending test
Apply the forces calculated for your rotor drag to one of your rotor blades. The test specimen must be of identical material and design as the final product for race. The test specimen must be representative of the blades used for race.
Provide photos of the test setup.
Note: This can be easily done by horizontally fixing your blade at the default pitch angle and by hanging weights from the blade.
PASS/FAIL criteria: The blade must not break or delaminate. It must not bend beyond the clearance to the tower.

10.4 Blade root connection pull test
Apply a pulling force on the blade root while holding the blade in place (as if you try to pull the root out of the blade). The force must be at least 1.5x the centrifugal force acting at the blade root while your rotor spins at maximum design speed (= when the ROPS activates). Use the heaviest weight measured in the blade weighing (see above) to calculate your critical centrifugal force. Do not use CAD weights. Mark and record the pre-test position of the blade root within the blade. Provide detail photographs of the blade root before and after testing.
PASS/FAIL criteria: The blade root must not disconnect from the blade or show any signs of deformation, cracks, elongation or even small movement from its pre-test position. The blade must not elongate beyond the blade tip to diffuser clearance.
Note: This test is not required for all-metal blades machined from one single piece.

11. Inspection Procedures

11.1 The inspection will be performed mostly at the base camp with some parts happening on the dyke. It is split into five sub-inspections which can be done independently:

- Safety inspection (Base Camp)
- General inspection (Base Camp)
- Competition box (Base Camp)
- Dyke tests (on the dyke)
- Drag race qualification (on the dyke)

There will be time slots posted for when inspections can be done at the base camp or on the dyke. There should not be any inspections outside of the published time slots.

11.2 Competition-box

There is a framework which is 2m wide and 3.5m high. The car must fit through this framework. The length of the car will be measured separately.

11.3 Flipping

- The mass and center of gravity of the car will be determined with a scale which will be placed under each tire. The driver's weight may be simulated with a weight of max. 65kg in the driver's seat.
- The momentum of inertia of the car and the total drag momentum will be calculated according to the Technical Handbook. The car's inertia must be bigger than the total drag momentum.
- The car will be placed on the aslope part of the dyke below the parking spots on the sea side, facing the sea. The car must perform a 90° turn inside the 15m turning diameter. The car must not flip. Outside support is not permitted. The car must come to a complete still stand at the end of the 90° turn.

11.4 Braking test

11.4.1 The car (with the heaviest driver in the driver's seat) will be placed on the steepest part of the dyke below the parking site facing the sea (angle ~13°). The vehicle brake must be able to hold the car in place. The driver must open the vehicle brake and let the car roll for 2m directly down the dyke. The driver must then stop the car within 3.8m.

11.4.2 The car will be placed backwards on the dyke, facing the dyke (same place as in 11.4.1). The vehicle brake must be able to hold the car in place.

11.5 The lightest driver will be weighed completely dressed and with full protective gear (once).

11.6 The functioning of the ROPS must be demonstrated (e.g. by driving the rotor with a power drill).
Note: For electronically controlled ROPS systems triggered by a threshold RPM: The threshold may be temporarily reduced for ROPS demonstration purposes.

11.7 A rotor run-up test will be conducted as part of the dyke tests to demonstrate vibration effects and the rotor brake effectiveness.

11.8 There will be a 50mm high threshold ("drempel") with a symmetrical on- and off-ramp. The WPV will be pushed over the drempel. No part of the WPV, except for the wheels, is allowed to touch the drempel.

12. Race Safety

12.1 When working on the car or in the workshop appropriate safety measures must be taken.
This includes for example: safety glasses when drilling or abrasive cutting, protective mask when working with carbon fiber – OUTSIDE ONLY!

12.2 The team member pushing the car must wear a helmet.

12.3 When the WPV is parked the rotor must not rotate.

12.4 The consumption of alcohol on the dyke is not permitted.

12.5 During a race only one team member is allowed to be on the track next to the racing car.
Other team members must stay off the track. Other team members are encouraged to run or bike off the track to help the car vacate the track (pushing) in case it stops during a race.

12.6 A team must not attempt any kind of test run on the dyke before it passed the sub-inspection "safety".

12.7 The participation in timed test runs is possible after a car passed the sub-inspection "safety". These runs will not be counted.

12.8 Further rules may be set by the event committee during the race.

13. Judging

13.1 Endurance

13.1.1 The judging will be based on the weighted average score from the racing days. Whether a car has an energy storage or not makes no difference.

13.1.2 The score for each race is the Wach number:

- Wach number = $\frac{avg.WPVspeed}{avg.windspeed}$ with $avg.WPVspeed = \frac{racedistance}{chargingtime+racetime}$
- The average wind speed is recorded by ideally 3 measurement masts along the racetrack at a height of approximately 2.5m. The weighting between the masts is: 17% start mast, 33% center mast, 50% final mast. The weighting may be adopted.

13.1.3 Every car must complete at least 3 runs on every racing day.
If a car fails to complete 3 runs a score of 0 will be regarded for the remaining runs. If a car completes more than 3 runs only the 3 runs with the highest score will be regarded.

13.1.4 The day score is the average score from the 3 runs mentioned before.

13.1.5 The total endurance score will be calculated with the following formula where $n_{totalruns}$ describes the total number of completed races by all teams on all racing days and $n_{totalrunsDay1/Day2/Day3}$ describes the total number of all races completed by all teams on that day. $s_{Day1/Day2/Day3}$ is the day score for the team in question.

$$s_{total} = s_{Day1}\frac{n_{totalrunsDay1}}{n_{totalruns}} + s_{Day2}\frac{n_{totalrunsDay2}}{n_{totalruns}} + s_{Day3}\frac{n_{totalrunsDay3}}{n_{totalruns}}$$

13.2 Fastest Run

The highest score achieved during any of the official races.
Since a run faster than the current world record will only be recognized as a world record if the wind direction during the race is within +/- 15° there is a special prize for the fastest run, regardless of the wind direction. All officially timed runs automatically qualify for this award.

13.3 Gerard Broers Innovation Award

The ranking for the Innovation Award will be equally based on the following two factors:

- Ranking by the Innovation Award panel
- Ranking by the other participating teams

The Innovation Award panel will get a general introduction to Racing Aeolus provided by the Rules Committee to serve as a common knowledge base. In addition to that every team has the chance to

hand in a one-page (A4) innovation poster per vehicle. Based on this document the panel will rank all participating WPV. The panel will not have access to the technical reports. The innovation poster will also be publicly displayed next to the WPV at the event location.
For the team ranking all teams will vote for what they consider the best innovation. You cannot vote for your own team. Every team must sort all other cars by their worthiness of the innovation award and state a brief explanation for the first three ranks. Teams that do not hand in an innovation poster on time will get zero points in the Innovation Award.

13.4 Drag Race

- To qualify for the drag race a WPV must demonstrate its drag racing capability to a race official:
  - The qualifying car must complete a 10m track under drag race conditions. There is no time limit for the completion of the track.
  - The qualification can take place on any of the racing or training days prior to the drag race day.
  - The qualification may be attempted multiple times. Teams with less or no qualification attempts will be allowed to go first.
- The date, time and race mode of the drag race will be set at a captains meeting.
- The drag race track will be set up as directly into the wind as possible with a length of up to 100m.
- The weather conditions must accord to the racing conditions stated before.
- Two cars will stand on the start line next to each other with still rotors, SOC=0% and start racing upon hand signal of the start marshal
- Pushing is not allowed.
- The cars have to stay in line.
- If the rotor cannot self-start one team member may give the rotor a slight nudge
- *The Spirit Bambi Rule (2022):*
  No components/parts of the cars may be lost/left behind during drag race (e. g. no blocks).
- Possible race modes are single elimination (single k.o.) and double elimination (double k.o.)
  - In case of single elimination: Points for the Racing Aeolus cup will be awarded corresponding to the stage a car reached before being eliminated.
  - In case of double elimination: The first four teams will be awarded points according to their ranking. All other cars will receive points corresponding to the stage they reached before being eliminated. If there is enough time and the teams are willing the drag race may be extended until the final placement of all cars has been settled.
  - *The Bries Bracket (2023):*
    In case of double elimination: Should the winner of the loser's bracket ("underdog") win the first final race there will be a "best two out of three" final. Should the winner of the winner's bracket win the first final race this team wins the drag race and there will be no "best two out of three".
  - In case of a relevant side wind component: The expected underdog will race on the upwind side. The classification will be based on the impression from the qualification.
  - In case of a very strong side wind component: Races may be held as a two-out-of-three race with reversed starting positions at every set.
- In case of very low winds there might be a push and roll contest instead of the drag race. The points for the Racing Aeolus Cup would be half of those of the drag race.

13.5 Newcomer Award

The newcomer award will be awarded to the best performing newcomer in the overall Racing Aeolus Cup placement. To qualify for this award teams have to attend with a working WPV and fulfill one of the following requirements:

- This team has never before attended Racing Aeolus with a WPV or none of their WPV have ever been "cleared to race".
- This team has attended Racing Aeolus before but none of their WPV have been "cleared to race" for the past two Racing Aeolus events.

All past teams from one institution are regarded as "one team". In case of a completely new team from an institution that has previously attended Racing Aeolus an exemption to the "one team" rule may be granted by the organizational committee upon request. The Newcomer Award is a side competition that does not factor into the overall Racing Aeolus Cup.

13.6 Racing Aeolus Cup

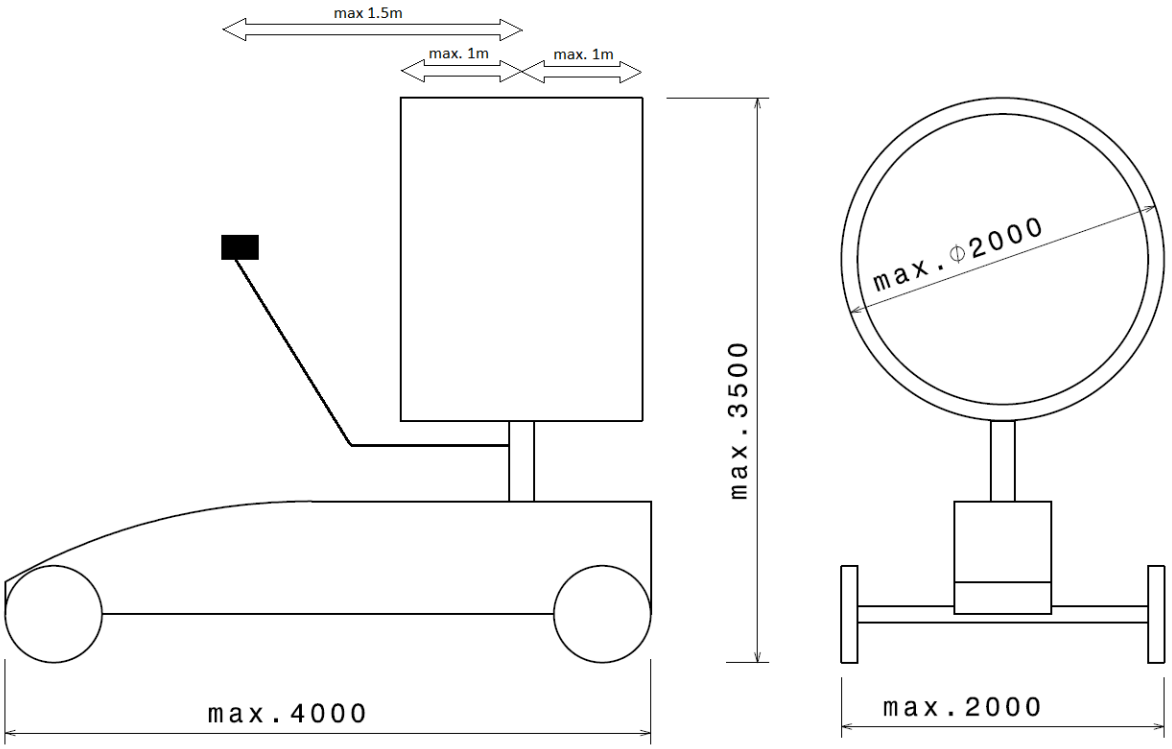
Each car receives points in the different competitions, relative to its performance. The car with the most points will earn its team the Racing Aeolus Cup title. Points will be awarded according to the table below down to the last place. On those places that get points below 10 the delta between ranks is one for the innovation award and drag race. The minimum number of points in a category is 0. In the event of a draw for any position the fastest run decides. Not participating in a challenge will lead to 0 points in that challenge. Further penalties are set out in the chapter "Penalties".

Challenge	Delta between ranks	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Endurance		Overall Wach number * 100 (x) *(e.g.: 84,49% * 100 = 84 points)*									
Fastest run		Fastest run Wach number * 50 (x) *(e.g.: 93,42% * 50 = 47 points)*									
Innovation	5 points	60	55	45	40	35	30	25	20	15	10
Drag race	5 points	40	35	30	25	20	15	10	9	8	7

(x) Round half up

Appendix

Appendix 1 – Dimensions example WPV (all dimensions in mm if not stated otherwise)



Appendix 2 – The two racetracks in Den Helder (both tracks may be used in both directions)

Image from Google maps

Appendix 3 – Maintenance area on dyke