



Spec sheet
Vortex Brainnovates
Alexandria, Egypt
1st year participating
Organizations: Vortex Co. and Brainnovate



Distance travelled to Tennessee = 10063.23 km

- Special features:**
- Four thrusters that provide all necessary degrees of freedom
 - Compact Size and light weight
 - Acrylic dome to provide better vision
 - Temperature sensor
 - Micro-ROV for inspecting pipes underwater
 - Pneumatically actuated gripper
 - Two cameras for the vision system.

- ROV Specs:**
- Name: Octopus
 - Total Mass in Air: 14 kg
 - Overall Dimensions: fits inside a 56 cm diameter circle
 - Primary Materials: PMMA, PA type 6, PLA and Polyethylene
 - Total ROV Cost: \$1900
 - Total ROV Design Person-Hours: at least 240 hours per person

- Safety features:**
- No sharp edges.
 - Fuses are used for the main and micro-ROVs.
 - Pressure relief valve is used.
 - Water detection sensor to detect leakage
 - All thrusters are shrouded with meshes that meet IP20 standard
 - Pressure of the pneumatic system is regulated below 2 bars

- Company members**
- Youssef Taha | 2nd year Middle School | Mechanical CTO
 - Mohahmed Ashraf | 2nd year Middle School | Co-pilot
 - Mahmoud Bahig | 2nd year Middle School | Mechanical designer
 - Alley El Din Ali | 5th year Elementary | Mechanical designer
 - Ali Abd El Halim | 6th year Elementary | Tether man
 - Mohamed Wael | 1st year High School | Electrical designer
 - Malak Ahmed | 1st year Middle School | Electrical designer
 - Fady Tharwat | 2nd year High School | CEO
 - Yassin Abdel Moniem | 6th year Elementary | Electrical designer
 - Fareeda Hossam El Din | 2nd year High School | Pilot | Electrical CTO

