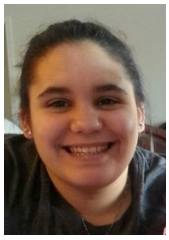
University of Massachusetts – Dartmouth

DROVE Company Spec. Sheet

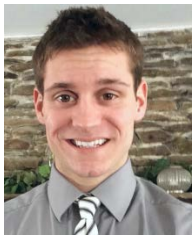
Team: IDEA Club - *DROVE*
School: University of Massachusetts Dartmouth
Location: Massachusetts, United States
Travel Distance: ~1000 miles
Team History: The IDEA Club has participated twice before in the Explorer class of the International MATE ROV competition. We have competed in Houston, Texas and Orlando, Florida. Two of this year's team members, Steven Brown, and Brandon MacDonald, are returning to the competition along with four others who will be experiencing it for the first time.

Steven Brown
CEO, Pilot and Computer Engineer
(Senior)

Brandon MacDonald
Mechanical and Design Engineer
(Junior)

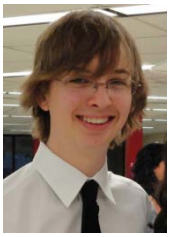


Stacy Correia
Electrical Engineer
(Junior)



Richard Bellizzi
Mechanical Engineer
(Junior)

Hugo Quezada
Mechanical Engineer
(Sophomore)



Edward Purtell
Computer Engineer
(Freshman)

ROV Name: DROVE (*D*artmouth *R*emotely *O*perated *V*ehicle *E*xplorer)

Total Cost: ~$8,000 including donations
Primary Materials Used In Construction:

- Syntactic Foam
- Stainless Steel
- High Density Polyethylene (HDPE)
- Fiberglass

Approximate Dimensions: L – 56 cm, W – 43 cm, H - 38 cm
Total Weight in Air: ~ 45 kg
Safety Features:

- Heavy duty stainless steel electronics box to ensure no leaks or failure under pressure.
- Custom waterproof connectors to ensure tight sealed wire connections.
- Thruster shrouds
- Current, temperature, and pressure sensors in box alert pilot to problems

Special Features:

- 4 vertical thrusters for lifting heavy loads to the surface.
- Expansion for up to 8 separate high-current tools (Speed and direction controlled).
- Compact size for tight spaces.
- Ultra bright LED lights for the darkest of places.
- Multi-use front mounted claw.
- Accelerometer & compass allow precise positioning and measurements.