2026: Pushing Performance: Science, Technology, Discovery In Harsh Environments

RANGER CLASS SCORE SHEET
World Championship - Ice Tank

Company CEO: _____

Product demonstration station officials: _____

Company Name

Safety		
Check here if the company has their PASSED safety inspection card **Companies without their safety inspection PASSED card cannot participate in the product demonstration.**		
Check here if the company presented you with a JSEA (Jobsite Safety Environmental Analysis)	JSEA Points 0 5	
Check here if float matches photo taken at safety inspection **Companies must use the same vehicle, float, and other devices that went through the safety inspection.**		
Total Safety (out of 5)		**Total**

Organizational and Operational Effectiveness (up to 10 points)	Points		
Up to 4 points - Teamwork/Collaboration & Communication			
Chain of command evident	0	1	
Roles clear and executed well	0	1	
Composure under pressure	0	1	
Supportive of each other and communicate well with each other	0	1	
Up to 2 points - Project Management			
Task plan is prepared for recovery of float	0	1	
Preparation for graphing data recovered from the float	0	1	
Up to 2 points - Problem Solving & Ability to Deal with Obstacles			
Awareness of float movements	0	1	
Readiness to troubleshoot and adapt if issues arise	0	1	
Up to 2 points - System Design & Control/Electrical			
Float is deployed by the end of the set-up period	0	1	
Float is operational and prepared to perform tasks	0	1	
Total Organizational and Operational Effectiveness (out of 10)			**Total**

Task # 4: *MATE Floats Under the Ice* (up to 70 points)	Points			
3.1 up to 70 points – Design and construct an operational vertical profiling float				
5 points – prior to the competition, design and construct a vertical profiling float	0		5	
5 points – float communicates with the station prior to descending	0		5	
up to 40 points – float completes two vertical profiles				
Vertical Profile #1				
up to 10 points – float completes 1st vertical profile				
10 points – using a buoyancy engine	0	5	10	
5 points – using a different mechanism				
5 points – float maintains a depth of 2.5 meters for 30 seconds	0		5	
5 points – float maintains a depth of 40 centimeters for 30 seconds	0		5	
-5 points – float breaks the surface or contacts the ice sheet		-5		
Vertical Profile #2				
up to 10 points – float completes 2nd vertical profile				
10 points – using a buoyancy engine	0	5	10	
5 points – using a different mechanism				
5 points – float maintains a depth of 2.5 meters for 30 seconds	0		5	
5 points – float maintains a depth of 40 centimeters for 30 seconds	0		5	
-5 points – float breaks the surface or contacts the ice sheet		-5		
up to 10 points – after recovery, float communicates with the station				
10 points – float communicates all data packets **5 points** – float communicates at least one data packet	0	5	10	
up to 10 points – profile is graphed as depth over time	0		10	
NOTE: If a company does not design and construct a float, or the float does not communicate data after recovery, companies may graph MATE-provided data. Companies may still get points above for completing vertical profiles. Graphing MATE data replaces the float communication all data packets to the shore station (which will confirm maintaining depth; companies cannot show they maintained depth from MATE data) and graphing the data points above.				
10 points – MATE-provided data is used to graph depth over time	0		10	
				Total
Total Task # 3 (out of 70)				

Penalty Points (deduct 5 points for each infraction)	No. of Infractions	
Safety: Product demonstration officials may deduct points for safety violations. Minor violations are a 5 point penalty. Major violations may be 10 or more points. Product demonstration officials may also disqualify a company for extreme safety violations. **Note: An official's decision to disqualify a company due to safety concerns is final. If there is a safety concern, please contact the lead safety inspector or competition coordinator.**		
Debris: Companies that leave debris (e.g. parts of their ROV, including weights and flotation) in the pool at the end of the product demonstration time, or leave debris that a diver must retrieve will receive penalty points. Mission props deployed into the pool **ARE NOT** considered debris. Unless otherwise noted, mission items to be recovered or replaced **ARE** considered debris. A company constructed collection basket is considered debris if it is still in the water, not under control of the ROV, when product demonstration time ends.	a	
Note: Do not include penalty points for the float breaching the surface or touching the ice. Those penalty points should be included into the point total for Task #4.		
Total Penalty Points	(total a) plus safety violations X 5 =	**Total**

There is no time bonus for the MATE Floats! Task at the World Championship.

TOTAL PRODUCT DEMONSTRATION SCORE	**Grand Total**

Official's initials: _____

Company CEO's initials: _____