

UCI's LIFT BAG INFLATION CHART

Depth	Pressure	Ambient Pressure (psi)	Lift Bag Capacity (lbs.)							
			100	300	500	1000	2000	3000	6000	1200
0'	1 ATM	14.7	1.6	3.2	6.4	15.8	31.6	47.5	95.1	190.2
33'	2 ATM	29.4	3.2	6.4	5.8	31.6	63.2	95	190.2	380.4
66'	3 ATM	44.1	4.8	9.6	23.7	47.4	94.8	142.5	285.3	570.6
99'	4 ATM	58.8	6.4	12.8	31.6	63.2	126.4	190	380.4	760.8
132'	5 ATM	73.5	8	16	39.5	79	158	237.5	475.5	951
165'	6 ATM	88.2	9.6	19.2	47.4	94.8	189.6	285	570.6	1141.2

To calculate lifting using UCI's lift bag inflation chart, first remember:

1 cubic foot of fresh water weighs 62.4 lbs.

1 cubic foot of salt water weighs 64 lbs.

Situation: You're in 33 feet of fresh water attempting to lift a 3,000-lbs. vehicle that displaces 16 cubic feet of water.

First, convert the 16 cubic feet of water the vehicle displaces into a weight in pounds, which will give you your displacement weight: $16 \times 62.4 = 998.4$ lbs. of displacement or buoyant weight.

Next, take the weight of the vehicle and subtract the displacement weight: $3,000 \text{ lbs} - 998.4 \text{ lbs.} = 2001.6 \text{ lbs.}$

So to lift the vehicle, you will need just over 2000 lbs. of lift. Using the lifting chart, you can see how many cubic feet of air you will need to add to the bags at different depths.

So, to do this lift you could use two 2000-lbs. lift bags with approximately 31.6 cuft of air in each.