

Customer Need:	Design Attributes	Metric	Units	Value
Provides air underwater	Provide user with adequate amount of air to survive another minute underwater	Volume	breaths = avg 1.6L	>= 1
Refillable by bike pump	Low Pressure	pressure	psi	<= 120
Stays in place on customer arm	Fixed location on user's arm after tightening	fixed	yes/no	yes
Not cumbersome on arm	Needs to fit on user's arm	length	cm	<= 18
Not cumbersome on arm	Lightweight	weight	lbs	<= 2
Not cumbersome on arm	Maximum distance protruding from arm	length	cm	<= 3
Not cumbersome on arm	Inobtrusive outer diameter	length	cm	<=1
Device does not restrict motion	Have full range of motion with product on	restrictivity	yes/no	yes
Safe to use	Speed of air doesn't damage lungs	Volumetric Flow Rate	(L/s)	<= 4 L/s
Safe to use	Temperature is safe for lungs	temperature	C	>= -15C
Hands free operation	Bite Activation	Pressure	psi	>=100
Quickly accessible	Time to get air	time	seconds	<= 2
Looks cool and fun	Attractive	likeability	yes/no	yes
Survives activity	Durable	lifespan	uses	>= 500
Status Indicator	Gauge Mechanism	air present	full/empty	full
Air stays in canister	Leakage	leak rate	L/s	?