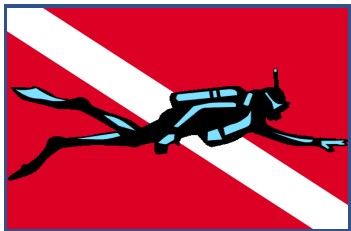


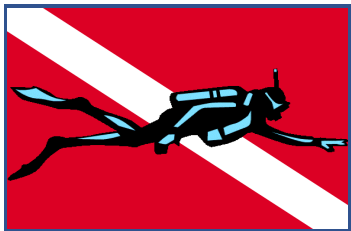
# Air vs Nitrox Diving



# Air Vs Nitrox



- **What is the technical difference between “Air” and “Nitrox” Diving Mixes?**
  - Air- Atmospheric Air with 21% Oxygen and 79% Nitrogen?\*
  - Nitrox- Diving Mixture in which the percentage of Oxygen is Increased and the percentage of Nitrogen is Decreased.
  - The most common mixes are 32% and 36% Oxygen.
  - Max is 40% for Recreation Diving.
- **Common Terminology:**
  - Enriched Air – EA
  - Enriched Air Nitrogen – EAN
  - Nitrox



# Why Nitrox

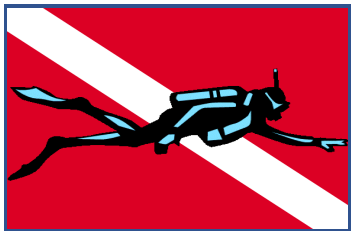


- **Advantages:**

- Significantly increases the “Bottom Time”. (MOD Limited)\*
- Decreases the potential for Decompression Sickness at the same depth and profile vs air. Reduces Nitrogen Absorbed. ( Inc NO DECO Time)
- Optimizes Bottom Time for “Middle Depths” from 60-100 feet.

- **Disadvantages:**

- At Nitrox mixes around 35% and above, Nitrox limits the depth you can dive to. Referred to as MOD- Maximum Operating Depth. (Higher the O<sub>2</sub>, the shallower the MOD).
- Requires O<sub>2</sub> Cleaning of Tanks using Nitrox during VIP.
- Nitrox fills/rental is slightly higher than Air Fills.
- **Consideration. Operators increasingly requiring Nitrox for Repetitive dives in the 60-110 ft Range.**



# Trading Depth for Time

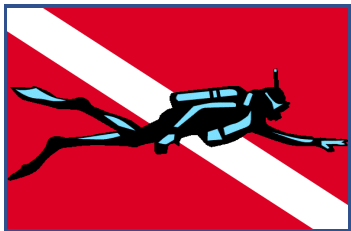


MOD Maximum Operating Depth*	
28%	132'
29%	126'
30%	121'
31%	116'
<b>32%</b>	<b>111'</b>
33%	107'
34%	103'
35%	99'
<b>36%</b>	<b>95'</b>
37%	92'
38%	89'
39%	85'

NO DECO Time (Min) Based on Nitrox Mix*			
Depth	Air	Nitrox 32%	Nitrox 36%
30'	197	594	545
40'	109	198	321
50'	<u>65</u>	<u>117</u>	<u>145</u>
60'	<u>48</u>	<u>74</u>	<u>95</u>
70'	<u>35</u>	<u>54</u>	<u>65</u>
80'	<u>26</u>	<u>42</u>	<u>50</u>
90'	<u>19</u>	<u>33</u>	<u>40</u>
100'	16	25	0
110'	12	20	0
120'	10	0	0
130'	8	0	0

\*MOD Limits due To Maximum O2 Saturation

\*Aqualung Buhlmann Z-16C Algorithm



# Summary / Discussion



- **Major Advantages of Nitrox:**
  - **Increased “Bottom Time”.**
  - **Decreased Risk of Decompression Sickness for Same Depths and Profiles.**

**NOTE- PADI NITROX Cert is a “NO Dive” Cert!!!**