



Ratio Deco Strategy

“Trimix 1:3 Profiles”

1:3 Ratio Deco

A *Relationship* exists between the **Bottom Time** and the **Deco Time**.

Depth Range: 220' (66m) - 290' (87m)

Bottom Time: 10 min - 120 min

Bottom Gases: Trimix 15/55 or 12/60

Deco Gases: 35/25, Nitrox 50% and Oxygen

Number on deco gases needed: 3

Set Point: 250'/75m

Relationship: 1:3

Deco Time: From 120'/36m - 0'/0m for 35/25, Nitrox 50% & O2 Deco Bottles

Ratio Deco

- 250'/ 75m Ratio
 - Set point
 - $250'/75m = 3:1$
 - 10'/3m shallower
 - - 5 min deco
 - 10'/3m deeper
 - + 5 min deco
 - Deco Time = $3 * BT$, then adjust for depth
 - Do 40% of Deco Time @ 20'/6m, 40% of Deco Time @ 70'/21m & 20% @ 120'/36m

Depth	Ratio
220'/66m	3:1 - 15
230'/69m	3:1 - 10
240'/72m	3:1 - 5
250'/75m	3:1
260'/78m	3:1 + 5
270'/81m	3:1 + 10
280'/84m	3:1 + 15
290'/87m	3:1 + 20



Ratio Deco: 250'/75m - BT 20 min Ratio: 1:3 (40% (20'/6m), 40% (70'/21m), 20% (120'/36m))

The graph displays a series of data points connected by a red line, showing a step-wise increase. The x-axis is marked with '0' at the origin. The y-axis features four horizontal grid lines. The data starts at the origin (0,0) and increases in discrete steps, reaching the top of the fourth grid line by the end of the plot.

Ratio Deco - Trimix

Method Detailed

1	Determine Deco Time	Deco Time = (Bottom Time • 3) + depth adj.
2	Apply 75% deep stops	At least 1 min
3	Apply 50% deep stops	Accelerate or not?
4	Distribute Deco Time	O ₂ = 40% of Deco Time, Nitrox 50 = 40% of Deco Time, 35/25 = 20% of Deco Time
5	Shape the S-Curve	For deco gases, 120'/36m - 80'/24m, & 70'/21m - 30'/9m
6	Shape the O ₂ Stops	10 minutes on, 5 minutes off

Ratio Deco - Trimix

0' (0m)

5 min up while still breathing the O2

20' (6m)

10 min on, 5 min off, 5 min on the O2

30' (9m)

4 min

40' (12m)

3 min

50' (15m)

3 min

60' (18m)

7 min

70' (21m)

7 min

80' (24m)

2 min

90' (27m)

1 min

100' (30m)

1 min

110' (33m)

4 min

120' (36m)

4 min

1	Determine Deco Time	20 min BT = 60 min Deco
2	Apply 75% deep stops	1 min due to exposure
3	Apply 50% deep stops	2 min due to exposure
4	Distribute Deco Time	40% @ 20'/6m, 40% @ 70'/21m and 20% @ 120'/36m
5	Shape the S-Curve	12 min - 120'/36 to 80'/24m 24 min - 70'/21m to 30'/9m
6	Shape the O2 Stops	20 min total

Loss of Deco Gas Nitrox 50 or 35/25

- Each member would do Required O₂ window times
- Pass the bottle back and fourth

So,

Diver A does Required Switch and Time (minimum 5 mins)

Then passes bottle to Diver B who completes Required Time (minimum 5 mins)

Then they move up 10'/3m where Diver B does Required time (minimum 5 mins)

Then passes bottle to Dive A who complete Required time (minimum 5 mins)

They now continue the ascent doing normal required deco times

Lost O2 Deco Bottle

Loss of Deco Gas of the Oxygen

- Each member could share and do Required O2 window times
- Passing the bottle back and fourth for the 20'/6m

So,

Diver A switches and does Required Oxygen Time at 20'/6m

Then passes bottle to Diver B the O2 Bottle who then completes the Required Time at 20'/6m

They now continue the ascent doing normal required deco times 3 minutes to the surface



Unified Team Diving

Next...

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and select the next chapter.