

EAD Tables for Open-Circuit Nitrox with 25-45% O₂

Jan Risberg

Background

The Norwegian Diving- and Treatment Tables (NDTT) include tables for equivalent air depth (EAD) when diving with oxygen enriched breathing gas (Nitrox) with 32%, 36% and 40% Oxygen. NDTT recommends the use of these standardized gas mixtures..

Gas manufacturers should supply gas with oxygen fraction +/- 0.5% of the specified value. A few times users have informed me that the oxygen fraction has deviated more than this. The question raises as to how to handle such a situation.

From a decompression-calculation point of view there is no concern using non-standardized gas mixtures. NDTT provide guidance for the calculation of EAD in such cases. It is straightforward to calculate deepest diving depth based on a maximum permissible pO₂ of 1.5 Bar. The tables printed below have been developed for those situations requiring the use of non-standardized gas mixtures.

We recommend that the standardized gas mixtures should be used. The following tables are mainly intended for those situations where delivered gas shows up to be outside specification. A secondary use may be extraordinary cases where operational or other circumstances make it necessary to use non-standardized mixtures.

Use of EAD tables

The EAD tables on the following pages should be used conventionally. Dives should not be planned to depths which will give a pO₂ exceeding 1.5 Bar. The deepest recommended diving depth has been indicated by a bold horizontal line and deeper depths are indicated by italics.

Example

PROBLEM: You plan a dive to 28 metres using Nitrox. Nitrox 36 is the best suited standardized gas mixture and you decide to use this. A dive to 28 metres using Nitrox 36 will give an AED of 21m and the decompression may be planned according to the 21m table. Deepest allowed diving depth is 31 m. When you test the gas on arrival it shows an oxygen fraction of 35.2%. How should you plan the diving?

SOLUTION: Choose the Nitrox table with an oxygen fraction within 0.5% of the measured value, in this case it will be Nitrox 35. Using this gas to a diving depth of 28m will give an AED of 22m and the 24m table should be used. Diving depth should not exceed 32m.

EAD-table for Open-Circuit Nitrox with 25 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	9	9	0,50
11	10	12	0,53
12	11	12	0,55
13	12	12	0,58
14	13	15	0,60
15	14	15	0,63
16	15	15	0,65
17	16	18	0,68
18	17	18	0,70
19	18	18	0,73
20	19	21	0,75
21	20	21	0,78
22	21	21	0,80
23	22	24	0,83
24	23	24	0,85
25	24	24	0,88
26	25	27	0,90
27	26	27	0,93
28	27	27	0,95
29	28	30	0,98
30	28	30	1,00
31	29	30	1,03
32	30	30	1,05
33	31	33	1,08
34	32	33	1,10
35	33	33	1,13
36	34	36	1,15
37	35	36	1,18
38	36	36	1,20
39	37	39	1,23
40	38	39	1,25

EAD-table for Open-Circuit Nitrox with 26 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	9	9	0,52
11	10	12	0,55
12	11	12	0,57
13	12	12	0,60
14	13	15	0,62
15	14	15	0,65
16	15	15	0,68
17	16	18	0,70
18	17	18	0,73
19	18	18	0,75
20	19	21	0,78
21	20	21	0,81
22	20	21	0,83
23	21	21	0,86
24	22	24	0,88
25	23	24	0,91
26	24	24	0,94
27	25	27	0,96
28	26	27	0,99
29	27	27	1,01
30	28	30	1,04
31	29	30	1,07
32	30	30	1,09
33	31	33	1,12
34	32	33	1,14
35	33	33	1,17
36	34	36	1,20
37	35	36	1,22
38	35	36	1,25
39	36	36	1,27
40	37	39	1,30

EAD-table for Open-Circuit Nitrox with 27 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	9	9	0,54
11	10	12	0,57
12	11	12	0,59
13	12	12	0,62
14	13	15	0,65
15	14	15	0,68
16	15	15	0,70
17	15	15	0,73
18	16	18	0,76
19	17	18	0,78
20	18	18	0,81
21	19	21	0,84
22	20	21	0,86
23	21	21	0,89
24	22	24	0,92
25	23	24	0,95
26	24	24	0,97
27	25	27	1,00
28	26	27	1,03
29	27	27	1,05
30	27	27	1,08
31	28	30	1,11
32	29	30	1,13
33	30	30	1,16
34	31	33	1,19
35	32	33	1,22
36	33	33	1,24
37	34	36	1,27
38	35	36	1,30
39	36	36	1,32
40	37	39	1,35

EAD-table for Open-Circuit Nitrox with 28 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	9	9	0,56
11	10	12	0,59
12	11	12	0,62
13	11	12	0,64
14	12	12	0,67
15	13	15	0,70
16	14	15	0,73
17	15	15	0,76
18	16	18	0,78
19	17	18	0,81
20	18	18	0,84
21	19	21	0,87
22	20	21	0,90
23	21	21	0,92
24	21	21	0,95
25	22	24	0,98
26	23	24	1,01
27	24	24	1,04
28	25	27	1,06
29	26	27	1,09
30	27	27	1,12
31	28	30	1,15
32	29	30	1,18
33	30	30	1,20
34	31	33	1,23
35	32	33	1,26
36	32	33	1,29
37	33	33	1,32
38	34	36	1,34
39	35	36	1,37
40	36	36	1,40

EAD-table for Open-Circuit Nitrox with 29 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	8	9	0,58
11	9	9	0,61
12	10	12	0,64
13	11	12	0,67
14	12	12	0,70
15	13	15	0,73
16	14	15	0,75
17	15	15	0,78
18	16	18	0,81
19	17	18	0,84
20	17	18	0,87
21	18	18	0,90
22	19	21	0,93
23	20	21	0,96
24	21	21	0,99
25	22	24	1,02
26	23	24	1,04
27	24	24	1,07
28	25	27	1,10
29	26	27	1,13
30	26	27	1,16
31	27	27	1,19
32	28	30	1,22
33	29	30	1,25
34	30	30	1,28
35	31	33	1,31
36	32	33	1,33
37	33	33	1,36
38	34	36	1,39
39	35	36	1,42
40	35	36	1,45

EAD-table for Open-Circuit Nitrox with 30 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	8	9	0,60
11	9	9	0,63
12	10	12	0,66
13	11	12	0,69
14	12	12	0,72
15	13	15	0,75
16	14	15	0,78
17	14	15	0,81
18	15	15	0,84
19	16	18	0,87
20	17	18	0,90
21	18	18	0,93
22	19	21	0,96
23	20	21	0,99
24	21	21	1,02
25	22	24	1,05
26	22	24	1,08
27	23	24	1,11
28	24	24	1,14
29	25	27	1,17
30	26	27	1,20
31	27	27	1,23
32	28	30	1,26
33	29	30	1,29
34	29	30	1,32
35	30	30	1,35
36	31	33	1,38
37	32	33	1,41
38	33	33	1,44
39	34	36	1,47
40	35	36	1,50

EAD-table for Open-Circuit Nitrox with 31 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	8	9	0,62
11	9	9	0,65
12	10	12	0,68
13	11	12	0,71
14	11	12	0,74
15	12	12	0,78
16	13	15	0,81
17	14	15	0,84
18	15	15	0,87
19	16	18	0,90
20	17	18	0,93
21	18	18	0,96
22	18	18	0,99
23	19	21	1,02
24	20	21	1,05
25	21	21	1,09
26	22	24	1,12
27	23	24	1,15
28	24	24	1,18
29	25	27	1,21
30	25	27	1,24
31	26	27	1,27
32	27	27	1,30
33	28	30	1,33
34	29	30	1,36
35	30	30	1,40
36	31	33	1,43
37	32	33	1,46
38	32	33	1,49
39	33	33	<i>1,52</i>
40	34	36	<i>1,55</i>

EAD-table for Open-Circuit Nitrox with 32 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	8	9	0,64
11	9	9	0,67
12	9	9	0,70
13	10	12	0,74
14	11	12	0,77
15	12	12	0,80
16	13	15	0,83
17	14	15	0,86
18	15	15	0,90
19	15	15	0,93
20	16	18	0,96
21	17	18	0,99
22	18	18	1,02
23	19	21	1,06
24	20	21	1,09
25	21	21	1,12
26	21	21	1,15
27	22	24	1,18
28	23	24	1,22
29	24	24	1,25
30	25	27	1,28
31	26	27	1,31
32	27	27	1,34
33	28	30	1,38
34	28	30	1,41
35	29	30	1,44
36	30	30	1,47
37	31	33	1,50
38	32	33	<i>1,54</i>
39	33	33	<i>1,57</i>
40	34	36	<i>1,60</i>

EAD-table for Open-Circuit Nitrox with 33 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	7	9	0,66
11	8	9	0,69
12	9	9	0,73
13	10	12	0,76
14	11	12	0,79
15	12	12	0,83
16	13	15	0,86
17	13	15	0,89
18	14	15	0,92
19	15	15	0,96
20	16	18	0,99
21	17	18	1,02
22	18	18	1,06
23	18	18	1,09
24	19	21	1,12
25	20	21	1,16
26	21	21	1,19
27	22	24	1,22
28	23	24	1,25
29	24	24	1,29
30	24	24	1,32
31	25	27	1,35
32	26	27	1,39
33	27	27	1,42
34	28	30	1,45
35	29	30	1,49
<i>36</i>	<i>30</i>	<i>30</i>	<i>1,52</i>
<i>37</i>	<i>30</i>	<i>30</i>	<i>1,55</i>
38	31	33	1,58
39	32	33	1,62
40	33	33	1,65

EAD-table for Open-Circuit Nitrox with 34 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	7	9	0,68
11	8	9	0,71
12	9	9	0,75
13	10	12	0,78
14	11	12	0,82
15	11	12	0,85
16	12	12	0,88
17	13	15	0,92
18	14	15	0,95
19	15	15	0,99
20	16	18	1,02
21	16	18	1,05
22	17	18	1,09
23	18	18	1,12
24	19	21	1,16
25	20	21	1,19
26	21	21	1,22
27	21	21	1,26
28	22	24	1,29
29	23	24	1,33
30	24	24	1,36
31	25	27	1,39
32	26	27	1,43
33	26	27	1,46
34	27	27	1,50
35	28	30	1,53
36	29	30	1,56
37	30	30	1,60
38	31	33	1,63
39	31	33	1,67
40	32	33	1,70

EAD-table for Open-Circuit Nitrox with 35 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	7	9	0,70
11	8	9	0,74
12	9	9	0,77
13	9	9	0,81
14	10	12	0,84
15	11	12	0,88
16	12	12	0,91
17	13	15	0,95
18	14	15	0,98
19	14	15	1,02
20	15	15	1,05
21	16	18	1,09
22	17	18	1,12
23	18	18	1,16
24	18	18	1,19
25	19	21	1,23
26	20	21	1,26
27	21	21	1,30
28	22	24	1,33
29	23	24	1,37
30	23	24	1,40
31	24	24	1,44
32	25	27	1,47
33	26	27	<i>1,51</i>
34	27	27	<i>1,54</i>
35	28	30	<i>1,58</i>
36	28	30	<i>1,61</i>
37	29	30	<i>1,65</i>
38	30	30	<i>1,68</i>
39	31	33	<i>1,72</i>
40	32	33	<i>1,75</i>

EAD-table for Open-Circuit Nitrox with 36 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	7	9	0,72
11	8	9	0,76
12	8	9	0,79
13	9	9	0,83
14	10	12	0,86
15	11	12	0,90
16	12	12	0,94
17	12	12	0,97
18	13	15	1,01
19	14	15	1,04
20	15	15	1,08
21	16	18	1,12
22	16	18	1,15
23	17	18	1,19
24	18	18	1,22
25	19	21	1,26
26	20	21	1,30
27	20	21	1,33
28	21	21	1,37
29	22	24	1,40
30	23	24	1,44
31	24	24	1,48
<i>32</i>	<i>25</i>	<i>27</i>	<i>1,51</i>
<i>33</i>	<i>25</i>	<i>27</i>	<i>1,55</i>
<i>34</i>	<i>26</i>	<i>27</i>	<i>1,58</i>
<i>35</i>	<i>27</i>	<i>27</i>	<i>1,62</i>
<i>36</i>	<i>28</i>	<i>30</i>	<i>1,66</i>
<i>37</i>	<i>29</i>	<i>30</i>	<i>1,69</i>
<i>38</i>	<i>29</i>	<i>30</i>	<i>1,73</i>
<i>39</i>	<i>30</i>	<i>30</i>	<i>1,76</i>
<i>40</i>	<i>31</i>	<i>33</i>	<i>1,80</i>

EAD-table for Open-Circuit Nitrox with 37 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	6	6	0,74
11	7	9	0,78
12	8	9	0,81
13	9	9	0,85
14	10	12	0,89
15	10	12	0,93
16	11	12	0,96
17	12	12	1,00
18	13	15	1,04
19	14	15	1,07
20	14	15	1,11
21	15	15	1,15
22	16	18	1,18
23	17	18	1,22
24	18	18	1,26
25	18	18	1,30
26	19	21	1,33
27	20	21	1,37
28	21	21	1,41
29	22	24	1,44
30	22	24	1,48
<i>31</i>	<i>23</i>	<i>24</i>	<i>1,52</i>
<i>32</i>	<i>24</i>	<i>24</i>	<i>1,55</i>
<i>33</i>	<i>25</i>	<i>27</i>	<i>1,59</i>
<i>34</i>	<i>26</i>	<i>27</i>	<i>1,63</i>
<i>35</i>	<i>26</i>	<i>27</i>	<i>1,67</i>
<i>36</i>	<i>27</i>	<i>27</i>	<i>1,70</i>
<i>37</i>	<i>28</i>	<i>30</i>	<i>1,74</i>
<i>38</i>	<i>29</i>	<i>30</i>	<i>1,78</i>

EAD-table for Open-Circuit Nitrox with 38 % O₂
(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	6	6	0,76
11	7	9	0,80
12	8	9	0,84
13	9	9	0,87
14	9	9	0,91
15	10	12	0,95
16	11	12	0,99
17	12	12	1,03
18	12	12	1,06
19	13	15	1,10
20	14	15	1,14
21	15	15	1,18
22	16	18	1,22
23	16	18	1,25
24	17	18	1,29
25	18	18	1,33
26	19	21	1,37
27	20	21	1,41
28	20	21	1,44
29	21	21	1,48
<i>30</i>	<i>22</i>	<i>24</i>	<i>1,52</i>
<i>31</i>	<i>23</i>	<i>24</i>	<i>1,56</i>
<i>32</i>	<i>23</i>	<i>24</i>	<i>1,60</i>
<i>33</i>	<i>24</i>	<i>24</i>	<i>1,63</i>
<i>34</i>	<i>25</i>	<i>27</i>	<i>1,67</i>
<i>35</i>	<i>26</i>	<i>27</i>	<i>1,71</i>
<i>36</i>	<i>27</i>	<i>27</i>	<i>1,75</i>
<i>37</i>	<i>27</i>	<i>27</i>	<i>1,79</i>

EAD-table for Open-Circuit Nitrox with 39 % O₂
(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	6	6	0,78
11	7	9	0,82
12	7	9	0,86
13	8	9	0,90
14	9	9	0,94
15	10	12	0,98
16	11	12	1,01
17	11	12	1,05
18	12	12	1,09
19	13	15	1,13
20	14	15	1,17
21	14	15	1,21
22	15	15	1,25
23	16	18	1,29
24	17	18	1,33
25	18	18	1,37
26	18	18	1,40
27	19	21	1,44
28	20	21	1,48
<i>29</i>	21	21	1,52
<i>30</i>	21	21	1,56
<i>31</i>	22	24	1,60
<i>32</i>	23	24	1,64
<i>33</i>	24	24	1,68
<i>34</i>	24	24	1,72
<i>35</i>	25	27	1,76
<i>36</i>	26	27	1,79

EAD-table for Open-Circuit Nitrox with 40 % O₂
(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	6	6	0,80
11	6	6	0,84
12	7	9	0,88
13	8	9	0,92
14	9	9	0,96
15	9	9	1,00
16	10	12	1,04
17	11	12	1,08
18	12	12	1,12
19	13	15	1,16
20	13	15	1,20
21	14	15	1,24
22	15	15	1,28
23	16	18	1,32
24	16	18	1,36
25	17	18	1,40
26	18	18	1,44
27	19	21	1,48
28	<i>19</i>	<i>21</i>	<i>1,52</i>
29	<i>20</i>	<i>21</i>	<i>1,56</i>
30	<i>21</i>	<i>21</i>	<i>1,60</i>
31	<i>22</i>	<i>24</i>	<i>1,64</i>
32	<i>22</i>	<i>24</i>	<i>1,68</i>
33	<i>23</i>	<i>24</i>	<i>1,72</i>
34	<i>24</i>	<i>24</i>	<i>1,76</i>
35	25	27	1,80

EAD-table for Open-Circuit Nitrox with 41 % O₂
(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	5	6	0,82
11	6	6	0,86
12	7	9	0,90
13	8	9	0,94
14	8	9	0,98
15	9	9	1,03
16	10	12	1,07
17	11	12	1,11
18	11	12	1,15
19	12	12	1,19
20	13	15	1,23
21	14	15	1,27
22	14	15	1,31
23	15	15	1,35
24	16	18	1,39
25	17	18	1,44
26	17	18	1,48
27	<i>18</i>	<i>18</i>	<i>1,52</i>
28	<i>19</i>	<i>21</i>	<i>1,56</i>
29	<i>20</i>	<i>21</i>	<i>1,60</i>
30	<i>20</i>	<i>21</i>	<i>1,64</i>
31	<i>21</i>	<i>21</i>	<i>1,68</i>
32	<i>22</i>	<i>24</i>	<i>1,72</i>
33	<i>23</i>	<i>24</i>	<i>1,76</i>
34	<i>23</i>	<i>24</i>	<i>1,80</i>

EAD-table for Open-Circuit Nitrox with 42 % O₂

(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	5	6	0,84
11	6	6	0,88
12	7	9	0,92
13	7	9	0,97
14	8	9	1,01
15	9	9	1,05
16	10	12	1,09
17	10	12	1,13
18	11	12	1,18
19	12	12	1,22
20	13	15	1,26
21	13	15	1,30
22	14	15	1,34
23	15	15	1,39
24	15	15	1,43
25	16	18	1,47
<i>26</i>	<i>17</i>	<i>18</i>	<i>1,51</i>
<i>27</i>	<i>18</i>	<i>18</i>	<i>1,55</i>
<i>28</i>	<i>18</i>	<i>18</i>	<i>1,60</i>
<i>29</i>	<i>19</i>	<i>21</i>	<i>1,64</i>
<i>30</i>	<i>20</i>	<i>21</i>	<i>1,68</i>
<i>31</i>	<i>21</i>	<i>21</i>	<i>1,72</i>
<i>32</i>	<i>21</i>	<i>21</i>	<i>1,76</i>

EAD-table for Open-Circuit Nitrox with 43 % O₂
(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	5	6	0,86
11	6	6	0,90
12	6	6	0,95
13	7	9	0,99
14	8	9	1,03
15	9	9	1,08
16	9	9	1,12
17	10	12	1,16
18	11	12	1,20
19	11	12	1,25
20	12	12	1,29
21	13	15	1,33
22	14	15	1,38
23	14	15	1,42
24	15	15	1,46
<i>25</i>	<i>16</i>	<i>18</i>	<i>1,51</i>
<i>26</i>	<i>16</i>	<i>18</i>	<i>1,55</i>
<i>27</i>	<i>17</i>	<i>18</i>	<i>1,59</i>
<i>28</i>	<i>18</i>	<i>18</i>	<i>1,63</i>
<i>29</i>	<i>19</i>	<i>21</i>	<i>1,68</i>
<i>30</i>	<i>19</i>	<i>21</i>	<i>1,72</i>
<i>31</i>	<i>20</i>	<i>21</i>	<i>1,76</i>

EAD-table for Open-Circuit Nitrox with 44 % O₂
(Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	5	6	0,88
11	5	6	0,92
12	6	6	0,97
13	7	9	1,01
14	8	9	1,06
15	8	9	1,10
16	9	9	1,14
17	10	12	1,19
18	10	12	1,23
19	11	12	1,28
20	12	12	1,32
21	12	12	1,36
22	13	15	1,41
23	14	15	1,45
24	15	15	1,50
<i>25</i>	<i>15</i>	<i>15</i>	<i>1,54</i>
<i>26</i>	<i>16</i>	<i>18</i>	<i>1,58</i>
<i>27</i>	<i>17</i>	<i>18</i>	<i>1,63</i>
<i>28</i>	<i>17</i>	<i>18</i>	<i>1,67</i>
<i>29</i>	<i>18</i>	<i>18</i>	<i>1,72</i>
<i>30</i>	<i>19</i>	<i>21</i>	<i>1,76</i>
<i>31</i>	<i>20</i>	<i>21</i>	<i>1,80</i>

EAD-table for Open-Circuit Nitrox with 45 % O₂
 (Dives should not be planned to depths indicated by italics)

Depth (metres)	EAD (metres)	Use table (metres)	pO ₂ (Bar)
10	4	6	0,90
11	5	6	0,95
12	6	6	0,99
13	7	9	1,04
14	7	9	1,08
15	8	9	1,13
16	9	9	1,17
17	9	9	1,22
18	10	12	1,26
19	11	12	1,31
20	11	12	1,35
21	12	12	1,40
22	13	15	1,44
23	13	15	1,49
<i>24</i>	<i>14</i>	<i>15</i>	<i>1,53</i>
25	<i>15</i>	<i>15</i>	<i>1,58</i>
<i>26</i>	<i>16</i>	<i>18</i>	<i>1,62</i>
27	<i>16</i>	<i>18</i>	<i>1,67</i>
<i>28</i>	<i>17</i>	<i>18</i>	<i>1,71</i>
29	<i>18</i>	<i>18</i>	<i>1,76</i>
<i>30</i>	<i>18</i>	<i>18</i>	<i>1,80</i>