

**DEPTH AIR CONSUMPTION(DACR) & AIR SUPPLY DURATION(ASD)****DIVE PLANNER** for calculations with a "Compact 80" **77 Cu. Ft. tank.**

Surface Air Consumption Rate (SACR) of .7 cu. Ft./minute (30 PSI/minute)

3,300 PSI/ 77 Cu. Ft. = 43 PSI per Cu. Ft.

DEPTH FT.	ATA	DACR in PSI	DACR in Cu. Ft.	ASD in Minutes
10	1.3	39 PSI/min.	.9/min.	84 min.
20	1.6	48 PSI/min.	1.12/min.	68 min.
30	1.9	57 PSI/min.	1.33/min.	57 min.
<b>33</b>	<b>2</b>	<b>60 PSI/min.</b>	<b>1.39/min.</b>	<b>55 min.</b>
40	2.21	66 PSI/min.	1.5/min.	50 min.
50	2.51	75 PSI/min.	1.75/min.	44 min.
60	2.81	84 PSI/min.	1.96/min.	39 min.
<b>66</b>	<b>3</b>	<b>90 PSI/min.</b>	<b>2/min.</b>	<b>36 min.</b>
70	3.12	93 PSI/min.	2.15/min.	35 min.
80	3.42	102 PSI/min.	2.39/min.	32 min.
90	3.72	111 PSI/min.	2.6/min.	29 min.
<b>99</b>	<b>4</b>	<b>120 PSI/min.</b>	<b>2.78/min.</b>	<b>27 min.</b>
100	4.03	121 PSI/min.	2.8/min.	27 min.
110	4.33	130 PSI/min.	3/min.	25 min.
120	4.63	139 PSI/min.	3.24/min.	23 min.
130	4.93	148 PSI/min.	3.45/min.	22 min.
<b>132</b>	<b>5</b>	<b>150 PSI/min.</b>	<b>3.5/min.</b>	<b>22 min.</b>
140	5.24	157 PSI/min.	3.66/min.	21 min.
150	5.54	166 PSI/min.	3.87/min.	19 min.
160	5.84	175 PSI/min.	4/min.	18 min.
<b>165</b>	<b>6</b>	<b>180 PSI/min.</b>	<b>4.18/min.</b>	<b>18 min.</b>
170	6.15	184 PSI/min.	4.3/min.	17 min.

**GAS PLANNING RULES FOR ASCENT AND SAFETY STOP:** To have enough gas to ascend at 30 Ft. per minute, complete a 3 minute safety stop, and surface with 500 PSI of reserve gas.

\* To ascend from a depth of 60 Ft. Begin your ascent with 785 PSI.

\*To ascend from a depth of 90 Ft. Begin your ascent with 890 PSI.

\*To ascend from a depth of 120 ft. Begin your ascent with 1,035 PSI.

To finish your dive with a **500 PSI gas reserve (11.6 Cu. Ft. if diving a 77 Cu. Ft. tank).** First determine gas usage for a 30 Ft. per minute ascent rate, starting from your maximum depth. Example: to ascend from 120 Ft. to 90 Ft. uses 139 PSI. To ascend from 90 Ft. to 60 Ft. uses 111 PSI, and ascending from 60 Ft. to 30 Ft. will require 84 PSI. Continuing your ascent from 30 Ft. to the surface will use another 57 PSI of gas. **SUMMARY:** An ascent from 60 Ft. requires 141 PSI, plus gas for a 3 minute safety stop at 20 ft., which is 144 PSI, this equals 285 PSI. Add 500 PSI for the reserve gas, brings the total to 785 PSI. The 890 PSI value for 90 Ft. and the 1,035 PSI value for 120 Ft. were calculated the same way. **All values were rounded up for conservative planning.**