

Using the NASE Gas Management Spreadsheet

The NASE Gas Management spreadsheet allows you to estimate the volume of gas needed for each segment of a multilevel decompression dive by entering values for Surface Air Consumption (SAC) and the depth and time of each dive segment. There are versions for both metric and imperial values.

The spreadsheets come with sample data already entered for SAC rate and segments 1-7 and 12-13. You can delete or overwrite this sample data as needed.

It's best if you begin by saving a copy of the spreadsheet, then work on the *copy* while leaving the original intact. To use the spreadsheet:

- ☐ Start by using your dive planning software to project your decompression stop depths and times, based on your planned dive depth and bottom time, and the gas mixtures you plan to use.
- ☐ On the *Gas Management* spreadsheet, enter the values for working and, if known, resting SAC rates in the spaces provided at the top of the spreadsheet. If needed, you can calculate SAC rate using the *NASE SAC Rate Calculator* spreadsheet.
- ☐ In the spaces below the SAC rate data, enter a description of each dive segment, its starting and ending depth, and its duration in minutes. As you do, the spreadsheet will automatically calculate a variety of data, including the volume of gas needed for each segment in either liters or cubic feet.

- ☐ Typically, you will treat ascents and descent distances of more than 3 m/10 ft as separate segments, as shown in the sample data. As the time needed to ascend between decompression stop depths is negligible, most divers choose to ignore it.
- ☐ You can enter, delete or change data in the *SAC Rate*, segment *Description*, starting and ending *Depth*, and *Duration* columns. All other cells are protected.
- ☐ The *Contingency Volume* column at the far right is based on 150 percent of the actual volume needed.
- ☐ Values for data entered in rows 12 and 13 will be based on your resting SAC rate, if known. These are typically your two shallowest stops. *Do not use these rows unless you know your resting SAC Rate and have entered it at the top of the page.*
- ☐ To determine how much of a particular gas mix to bring with you, add the *Contingency Volume* values for each of the segments in which you will be using that particular gas mix.

Warning: Actual gas consumption can be affected by a variety of factors, and there is no guarantee that the data you generate using this spreadsheet will be accurate in any given situation. Smart divers will make sure they carry *at least* as much gas as the *Contingency Volumes* shown, if not more.