

Ask The Experts

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Question: I'm in the market for a new mainsail on my keelboat, can you describe the merits and debits of a main with full length battens versus just the top two being full length?

Answer: Contrary to popular belief, full battens on conventional mainsails are not designed to shape the cross-section shape of the sail. More exactly, the battens are in place to lend support and stability to the structure while at the same time conforming to the different shapes of the sail as you alter it through normal trimming.

The primary function of full and/or any combination of full battens is to act as motion dampers; limiting the amount and harshness of sail flogging in normal use, such as tacking and going head-to-wind. This fundamental feature is important because the two primary things that break down sailcloth of all types are U.V. degradation and day-to-day use. The former is dependant on location and time on the water, but the latter can be significantly slowed by the use of full battens. The result is that a mainsail will retain the designed shape longer, providing better performance for a much longer period. In addition, the long-term life expectancy of the sail is appreciably increased.

Any combination of full length battens work well at damping the motion of the sail, so the pros/cons between say, two or four full battens are these:

All full battens:

- Increased ease in flaking the sail down, especially if used with some sort of Lazy Jack system
- Increased cost and weight, as more fittings and batten stock are required
- For blue water sailors in the Trades, full length lower battens will remain in contact with the lower shrouds for long periods of downwind sailing and have a lot of wear and tear at the contact points.

Top two full battens:

- Decreased weight and cost
- Not as easy to flake
- In composite sails, there is a likelihood of a difference in shape deformation between the full and conventional battens which will make the sail less smooth over time

The choice between the two configurations should be based on both budget and expected use of the sail, keeping the points above in mind.