F1 Surgical Headlight Voted Best Of July

Surgical Products readers have chosen the F1 from HHW Technologies, Inc. as the Readers' Choice product for July.

How was the idea for the F1 developed?

The F1 concept was originated by a spine surgeon who purchased numerous alternatives to the light box which included halogens and LEDs. He rapidly found that the light quality was nowhere near the acceptable level of a standard plug in light box. At that point development started, establishing a baseline of current light box technology and usage based on a 300 watt Xenon light box with a cable in good condition. With that knowledge we set our objective at maintaining that level of quality and looked at what technologies were available to maintain high intensity and low heat which we found in Arc Lamps. From that point we looked at what parameters would have to be addressed. It needed to be portable, maintain a minimum 4 hrs of battery duration with intensity, daylight quality and true color rendition.

What needs were you looking to meet with this product?

The key needs were high color quality, intensity and constant light output with portability. The F1 allows the surgeon to not be distracted with something as simple as being plugged in and unplugged. At times valuable time is wasted by this. Additionally we wanted to address the constant exposure of radiation that surgeons are exposed to during their procedures. Using the F1 gives them total freedom of movement without assistance which improves their efficiency and reduces procedure time.

How does the product work?

The F1 offers the only HID (high intensity discharge) portable headlight. By using Xenon technology we produce a comparable light to the standard light box producing daylight quality and true color rendition. You can think of our F1 HID Portable Surgical Headlight system as a “portable light box” that you wear on an ergonomically friendly belt that offers support for the unit and the user. Weighing in at only 1.8lbs the F1 is about the size of a paperback novel. One of the key features of the F1 is our “stay cool technology”, the unit never gets hot even after 3 ½-4 hrs of use.

As far as our battery we use a Lithium Polymer battery the lightest batteries currently available for longer life & comfort. The F1 delivers constant light over the total 4 hrs of battery usage to have the first 5 minutes as bright as the last 5 minutes.

What important information should surgeons keep in mind when using the F1?

The most important thing for surgeons is for them is to choose your system to match your procedure durations. If a procedure is 3 hours or under, a single system will be sufficient. But if your cases are back to back then you need to choose a Double system for continuous light. Wear one while one is charging, it takes less than 15 seconds to swap to a charge light source with minimal interruption to the surgeon.

The next important thing is for surgeons to know that the F1 offers 4 different headset options to accommodate different specialties.

1. The 1.75 inch diameter spot has the highest intensity approx 120k lux at 18 inches with best columniation for deep cavity and wearing loupes.
2. The 2.5 inch diameter spot is the best all around coming in at 90k lux at 18 inches, with or without loupes.
3. The 3.0 inch diameter spot, larger spot 60k lux at 18 inches, great for Ortho, Cardiac or OB.
4. Custom headsets for older or non standard loupes.

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