

Premier's 4000c & 4000s Key Questions

Premier's 4000 and New Heads

What's different about Premier's new "blue" shear head?

- Roller bearings for the drive shaft instead of sleeve bushings. Benefit? Less friction, power loss and heat.
- Cutter forks "float" when a cutter is lost due to inadequate tension. Benefit? The chance of damaging the drive gear if a cutter flies off (caused by too little tension) is very low.
- Fewer parts to wear out or replace.
- It's price is 15% less!

Why are ventilated heads superior?

In our tests, **heads that were ventilated by air driven forward through the heads ran 20°F cooler** than identical heads on machines that were ventilated out the side of the motor—without any change occurring in the motor temperature itself.

I have a Premier 3000. Can I handle the faster, stronger 4000?

Yes. The extra speed and torque requires a little more focus for the first hour or so until you become accustomed to the feel, balance and speed. Once comfortable, most users soon appreciate the power.

Premier's 4000—Speed, Watts & Oiling

Is higher speed good?

Higher speed produces a smoother, more uniform and thus more attractive finish on the animal.

But higher speed also produces more friction; more rapid wear of the blades/combs/cutters; higher blade/comb running temperature; more noise and more vibration.

Does high speed = high power?

Power is torque—not rpm(s).

Machines with high torque will maintain their speed when pushed rapidly through dense, thick fiber.

Motors with less torque will slow down when pushed too fast.

Does high watt rating = more power?

Many suppliers like to brag about the high watt rating of their machines. Much of this is a myth. Why?

Watts simply measure the input energy per hour. They don't tell you what % of

the watts was used for power vs heat.

Permanent magnet motors such as the 4000 are an energy-efficient motor design. A high % of the watts they use is used to produce power (not heat). Push them rapidly through dense fiber and energy consumption jumps above 200 watts. As you pull back for another stroke energy usage drops as low as 50 watts.

By contrast, universal motors (used in many other machines) draw high watts even when "idling." That explains why they often run so "hot," and must exhaust more air.

How valuable is oiling and why?

Oiling reduces both heat and premature wear. How often? Don't wait until the "sound" changes because, unlike universal motors, permanent magnet motors do not sound different when they need oil. **Apply oil to the tips of the teeth every 3 minutes (less for llamas, alpacas and guard dogs).**

Cutters and Blades—Tensioning

Why correct cutter tension on shear heads is so critical—

Too little tension—allows cutters to fly off. On many shear heads (including Premier's earlier design), the fork "fingers" could then drop down between the comb's teeth—which in turn shears the drive gear.

When we designed our new shear head, we eliminated this risk.

Too much tension—results in excessive friction between comb and cutter. Result? Rapid wear and excess heat.

To get it "right"—turn the black tension knob down (forcing the cutter against the comb) until resistance is felt. Then add one more full turn before turning on the machine. Then adjust cautiously as needed while it's operating.

Clipper blade tension?

Too little tension—won't damage anything—but they won't cut fiber.

Too much tension—on clipper blades causes higher friction, higher blade temperatures and shorter blade life.

The goal is just enough tension.