

LARGE PROCESSOR



Bell's Machining Bell 4000C



Manufacturer
Bell's Machining,
Welding & Hydraulics
2044 Rogers Rd.
Perth, ON K7H 1P9
Canada
ph: 888/995-1965
www.bellsmachining.com

Machine Operator
Andrew Clement

Assistant
Matt Thomas

Time
10 min. 10 sec

Cords Processed
1.5 Cords

Cords/Hour
8.85 Cords

While most of the machines at the Shoot-Out were run by company salesmen and technicians, Bell's brought in

Andrew Clement, a customer who uses the processors on a daily basis for his firewood business. Andrew's father started his firewood business 30 years ago and the Clements now process roughly 2,000 cords per year on his 4000C. As it turned out, Andrew was the perfect choice to show the machine. "The Bell's people were a little uneasy about some of the crooked logs," he recalled, "but I told them there'd be no problem." While he noted that the logs were a little "bumpy," he said that they are typical of what he cuts on a daily basis.

The tandem 6,000-pound axles were a big help moving the 4-1/2-ton machine over the soft ground, though it took every bit of skid-steer operator Dave Schomp's skill to maneuver it into its tight spot in the Shoot-Out arena. In just a few minutes, the out-feed conveyor was folded down and the deck lowered into position ready to receive its logs. The 44-inch-diameter inserted tooth cut-off saw is the most noticeable feature of the processor. As it pivoted down to make a cut, the sound of metal slicing through wood

and plume of sawdust lasted little more than a second before the saw lifted back up, as though hungry to make the next cut. The 66-hp Cat engine put its muscle into pushing the wood through an 8-way wedge, maintaining the saw speed, and advancing the log into position for the next cut—all in approximately 3 seconds.

To ensure consistent firewood length, the Bell's 4000 and 6000 both feature a hydraulically controlled log stop that automatically retracts slightly as the saw cuts the log to allow the firewood room to drop straight down into the splitting chamber without binding. Another innovative feature of the new Bell's processors is a "live log repositioning system," which consists of a hydraulically activated kicker and rollers that allow the operator to straighten the log in the splitting chamber or turn it so that a knot is on top.

One might expect a processor of this size to be a complex maze of valves and levers, but this processor is a "fly by wire" (or "process by wire") system with a single 4-way joystick that also houses a trigger and seven buttons. With that one joystick, the operator controls the live deck, infeed, clamping and cutting, wedge height, and splitting. Pressing the joystick trigger starts the split cycle, freeing the operator to advance and cut the next piece of

wood while the processor forces the wood through the 8-way splitter. When asked how he liked the electric-over-hydraulic joystick, Andrew indicated that it makes the machine easy to learn, and that it has worked reliably for him in his business. “At first, I was a little concerned since the joystick is designed for left-hand control,” Andrew recalled. “But it didn’t take long to get used to it, and after a couple of days, it became second nature.”

Surprisingly, the Bell’s 4000C outperformed the larger 6000C—and did it with roughly 2/3 the horsepower! The Shoot-Out logs were

almost the perfect size for the 4000, with its smaller cutoff saw and faster hydraulics, but were a bit on the small size to show the 6000 to its best advantage. •



MACHINE SPECS

Model	4000C
Power.....	66-hp Cat turbo diesel
Cutoff	44-in. circle saw
Cycle time.....	2.5 sec.
Log loading.....	10-foot, 3-strand live deck
Max diameter	20 in.
Options used.....	8-way splitting wedge, air- conditioned cab, dump tray, 16-ft. attached swivel conveyor

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