

The Brute

Barr-Mullin introduced the world's first optimizer in 1972, so we've had a lot of experience with designing systems and we have a good idea of what our customers want and need in a saw: **SPEED, ACCURACY, EASY TO USE AND RELIABLE MACHINES.** The BRUTE is Barr-Mullin's latest addition to a long established line of optimizing cut off saws. Even though the Brute is capable of incredible speeds the BRUTE was not engineered solely for speed, but also for durability, flexibility, and accuracy. We don't call it The BRUTE for nothing. The BMI BRUTE is specially designed for 24 hours a day, 7 days a week operation. It has been fitted with oversized bearings, reinforced drive belts, air-loaded hold down rollers, and 12 steel knurled drive rollers which makes the BRUTE virtually indestructible, even in the most demanding applications.



Brute Advantages:

Knurled Steel Feed Rollers: Twelve steel rollers are knurled with an aggressive diamond pattern to facilitate a sure grip on the board and guarantee utmost accuracy.

Air Loaded Hold Down Rollers: One hundred pounds of air pressure is applied to each of twelve hold down rollers to ensure maximum control of material as it passes through the machine.

"Smart" Hold Down Rollers: Each roller is programmed to lower after the front end of the piece has passed minimizing slippage.

Pentium III PC: 400MHz, 256MB Ram, 8GB hard drive with full size enhanced keyboard. Comes with 1.44MB 3.5-inch drive and 15" color flat screen LCD.

Windows NT®: The latest of all technologies is utilized in The BRUTE. This is evident in the use of Windows NT® as the computer operating system. Windows NT® allows speed and connectivity never before seen in optimizing systems.

Low Maintenance Design: The electrical and mechanical aspects of the Brute were designed with the end user in mind. Periodic greasing and routine maintenance are all that is needed to get years of use from the Brute.

Single Unit Construction: The BRUTE is designed as one piece with everything contained in the frame of the machine. There are no external control cabinets. The result of this design is a reduction of over 40% of the necessary wiring connections.

Motorized Thickness Adjustment: Change over to a different thickness of material requires only the push of a button to raise or lower the hold down rollers.

Modular Design: Because of the way The BRUTE is designed, capacity changes can be modified on-site. For instance, when a defect scanner is added at a later date, the front end of The BRUTE can be easily removed. Also, if production demands that the cut off line handle wider material, The BRUTE can be retrofitted in just a few hours and be changed from 9" capacity to 13" capacity.



Optimization Methods

Cut for the Highest Yield: Clear areas of lumber are optimized to produce the maximum amount of usable material. Maximizing yield is the only emphasis with this method. This method produces best results when random length material is required.

Cut for the Highest Value: Cut combinations are made in accordance to values placed on each desired length. The value per inch for each piece is determined by the user and entered in a field in the cutbill screen. When used correctly, the optimization will result in the highest overall value for a clear length of lumber. This method can also be used to prioritize certain pieces so that they are produced at every available opportunity.

Ratio - Pieces: This optimization method allows the BRUTE to obtain the highest yield while maintaining the proper ratio of the quantity of different sizes. By evaluating the production data and comparing that to the distribution required, the priority of the cut lengths constantly changes. Because the number of cut options the system can make remains the same throughout the entire production run, the end result of this method of optimization is a high overall yield and even distribution.

Ratio - Square Feet: This exclusive method optimizes in exactly the same way as Ratio-Pieces. However, the required amount for each length is entered as square footage instead of pieces. This method produces optimum yield and distribution of material for glue-up purposes; particularly when random width material is being processed.

Software Features

- ◆ Unlimited Storage Capacity for Cutbills
- ◆ Comes Equipped w/CellScan Software
- ◆ Unlimited Lengths per Cutbill
- ◆ Up to 200 Cutbills at a time
- ◆ Lower Grade Recovery
- ◆ Re-rip Recovery
- ◆ Random Length or Finger joint Cuts
- ◆ Programmable Automatic End Trim
- ◆ Random Width Processing
- ◆ Defined Width Processing
- ◆ Production Run Continuation
- ◆ Networkable
- ◆ On-line Help Screens



- ◆ Printable Production Reports
- ◆ Printable Lumber Data Reports
- ◆ Waste Differing Cutbills
- ◆ Variable Production Speed
- ◆ User Friendly Error Messages
- ◆ Scanner Ready

- ◆ Graphic Troubleshooting Screen
- ◆ Simulation of Actual Board Data
- ◆ Load-at-a-Time Processing

Standard Features:

The only optimizer in the world that has been designed “from the frame up” to minimize tear-out.

Slip Detection Sensor: Measures the amount of slip that a board encounters when traveling through the machine. Any slip detected is compensated for at the saw blade to ensure that the board is optimized correctly and defects are completely removed.

Jam Detection Sensor: The Jam Sensor monitors the movement of the board as it is being processed. If a jam situation is detected, The BRUTE will automatically clear the jam so that production can continue uninterrupted.

Replaceable Anvil Inserts: As more and more material is processed on The BRUTE, widening of the anvil around the saw blade is inevitable. Anvil inserts placed on each side of the blade, on the anvil as well as the back fence, can easily be replaced as needed.

Internal System Modem: With high-speed data transmission of 56,600 bps, the modem allows Barr-Mullin service engineers to troubleshoot The BRUTE from our Raleigh, NC facility. Over 90% of our service calls are handled this way. This results in less costly service to your system, and greatly reduces down time.

Cabinet Mounted Phone: If a problem with The BRUTE does arise, the machine operator can talk to a BMI service engineer, without leaving the machine. Operator observations and technical help are communicated immediately from the saw.

Power Line Conditioner: Corrects under and over voltage conditions without use of any battery power. This provides noise free power to the computer, which reduces false signaling.

Dynamic Saw Motor Brake: Electrically stops blade within 10 to 12 seconds of shutdown.

Safety Shut-off Switches: Located on every compartment door and hood, the safety limit switches completely shut down the system and activate the Saw Motor Brake upon activation.

Options:

Waste Blow Off at the Blade:

CellScan Lumber Scanning: Provides automatic defect detection and operator free operation.

Board Width Sensor: Line Scan Camera with digital output automatically measures width. This allows the user to cut different width lumber simultaneously. The sensor supports glue up and re-rips.

Grade Mark Scanner: Grade scanner picks up marks on the edge of the board (1 mark-grade 1, 2 marks-grade 2, etc.). This allows the user to cut various qualities of lumber in different ways. Scanner supports re-rips and fingerjoint applications.



Brute Capacity and Specifications:

Available Models:	<i>BWS-8L, BWS-8S, BWS-12L, and BWS-12S</i>
Material Thickness:	<i>2.00" (51 mm) Standard</i>
Material Width:	<i>9" (BWS-8) or 13" (BWS-12)</i>
Feed Rate:	<i>Variable to 1000 FPM</i>
Acceleration	<i>Variable to 1,000 in/sec²</i>
Feed Height:	<i>42"</i>
Floor Space:	<i>Approximately 4' by 12' (BWS-L) Approximately 4' by 7' 4" (BWS-S)</i>
Arbor Motor:	<i>7.5 HP (BWS-8) , 10 HP (BWS-12)</i>
Saw Speed:	<i>3824 RPM (BWS-8), 3530 RPM (BWS-12)</i>
Saw Stroke Time	<i>As little as 0.2 Seconds</i>
Power Transmission:	<i>Timing Belt</i>
Feedworks:	<i>Twelve powered knurled steel feed rollers</i>
Drive Motor:	<i>High torque, high inertia, AC Servo</i>
Saw Blade:	<i>20" / 1" bore (BWS-8), 22" / 1" bore (BWS-12)</i>
Dust Collection:	<i>One 6" o.d. and One 4" o.d. outlet @ 1500 CFM</i>
Air Supply:	<i>100psi @ 18 CFM (saw only)</i>
Power Supply:	<i>230 volt - 3 phase - 60 amp - 60 hertz Total power requirement - 30 kva</i>

