(Shown with optional **HSRF** ripsaw feeder and **SR-Series** gang rip saw)

"Heavy-Builts"

Hasko

Flooring and Woodworking Machinery Since 1930

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DESCRIPTION (Subject to Conditions of Sale on Reverse Side)

Hasko Model HSLS with Haskan Width-Optimizing-Laser Scanning System And Optional Bow-Buster

(For High Production Straight-Line Gang Ripping Operations)

OVERVIEW:

The **Hasko HSLS High Speed Laser Scanning System** with optional Bow-Busting is a simple but robust and cost effective width optimizing option that can improve your overall yield and lumber utilization while obtaining optimum production. While specifically designed for use with a **Hasko SR-Series** Gang Rip Saw and **HSRF** Shifting Guide Infeed system, the **HSLS** will easily integrate with other ripping systems. This system is ideal for manufacturers of hardwood flooring, lineal mouldings, dimension, and other rip-to-size operations.

The **Hasko HSLS** with **Haskan** Width-Optimizing-Scanning System consists of a 6.5' wide by 17' long, eight strand, two-stop Accumulating Chain Deck. This system is available with an optional integrated pop-up saw and board clamp for sawing (busting) boards with excessive side bend. A steel fabricated stand and Laser Tower serves as the operator's station and as a mounting point for a ScanMeg Laser-Curtain-Board-Scanner, overhead servo driven Laser Guide Lights, and NEMA 12 control enclosure with a Qterm G-70 color touch screen operator's interface. An operators console with operator's Joy Stick Controller, as well as controls for the bow busting saw and other functions is positioned at this station.

OPERATION:

As the boards arrive at the first stop (the operator's laser stop station) they are single point scanned for width by a ScanMeg Laser Light Curtain to within .060 of their actual width. The servo driven Laser Guide Lights mounted overhead in the operator's tower are set to match the saw spacing in the gang ripsaw and depict the saw lines on the boards. As the boards are scanned, the servo driven Laser Guide Lights shift to indicate the best cut combination for that board as determined by your targeted widths. The operator then has the option to accept or amend the saw cut location indicated by the laser lights. With the optional bow saw operators can bust boards with excessive bow in order to improve net yield. The laser lights (cut position) can be tweaked or changed for the best yield depending on wane, board bow, or the defects that are observed by the operator. When the cut position has been determined and the operator releases the board from the first stop, it is staged at the second stop, and then proceeds to the **Hasko HSRF** Shifting Guide Optimizing Ripsaw Feeder to be accurately positioned and straight line ripped by the **Hasko SR-Series** Gang Rip Saw.

MACHINE SAFETY, GUARDING, OSHA - See Reverse Side

OPERATOR'S INTERFACE:

This is one of the simplest rip optimizing systems available in the industry and will provide accurate solutions for any arbor stack up. The software is both user friendly and versatile. The software settings are matched to the hardware at the factory leaving only a few operational settings to be programmed into the system by the operator. All data entry and changeovers are quick and easy via the systems touch screen.

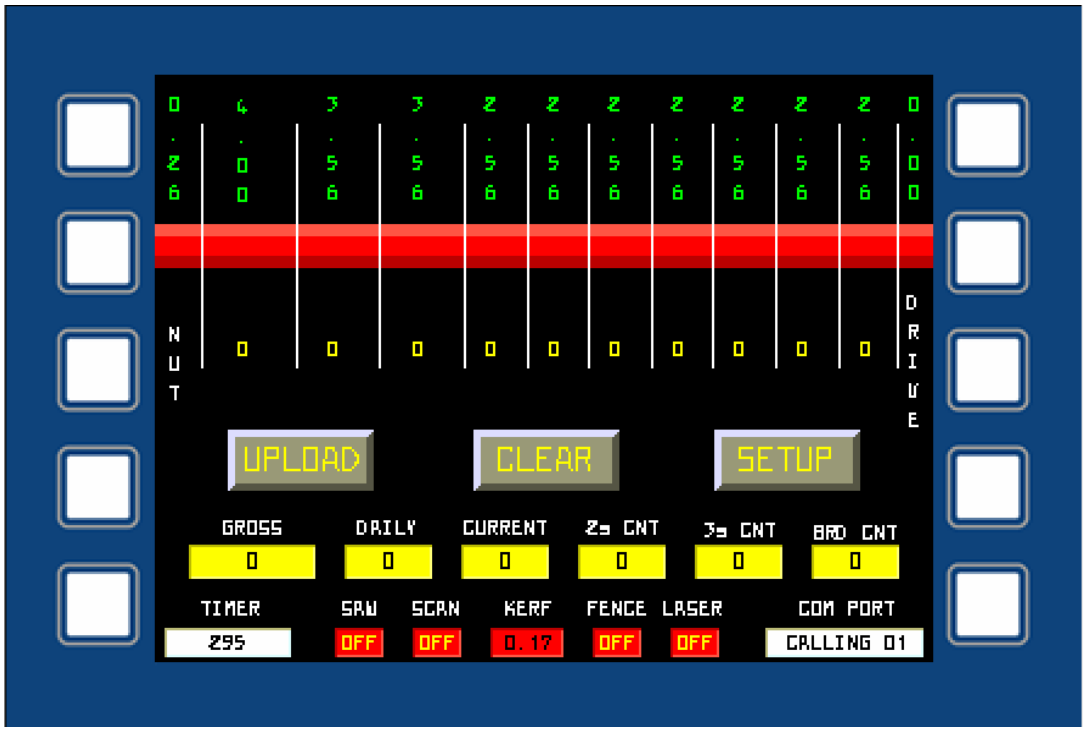
The system consists of an (1) Optional board dealer; (2) High-speed heavy-built scan conveyor; (3) Intermediate board stop; (4) Light curtain style of laser scanner at second board stop with alignment guide; (5) Servo- positioned array of laser lines to display solutions; and, (6) Touch screen interface used for data reporting and programming. An optional (7) Busting saw is included to reduce loss due to side bow. This scanner is generally to optimize boards for a (8) Servo-driven guide and infeed table, and (9) Straight line rip gang saw.

The (2) conveyor incorporates a fence for scanning each board against a common reference. The scan conveyor's scan area is either manually loaded or optionally fed by an incorporated board dealer. The scan chains will also include at least one set of stops to maintain control of the board until it is passed on to the next process. The (4) light curtain scanner uses multiple emitter / receiver pairs to measure each board's width and projected side bow. The (5) servo-controller and (6) touch screen combine to read the board's width from the light curtain scanner. Together they find the correct solution and then display the rip solution on the board. When the (7) optional busting saw is used, a wrap over clamp secures the board before the upcut saw busts the board. To safeguard the operator, dual saw actuator buttons are used.

SOFTWARE FEATURES:

1- Unlimited arbor definitions, quick and easy programming.
2- Individual tallies for daily, gross, targeted widths, board count, and each arbor pocket.
3- Programmable system parameters for both laser display and moving fence.
4- Automatic display of the rip solution and side bow.
5- Manual mode and/or override of solution and bow via operator joystick.
6- Automatic re-scans after board busting.
7- Automatic length measure.
8- Solutions confirmed by operator.

Touch Screen Programming-Main Screen:



The touch screen's main screen is used to initiate programming, monitor system status, errors, and accumulative tallies. At the top of the screen is a graphic display of the current arbor setup in use. The width of each pocket is displayed between graphics representing blades. A tally of the number of linear feet that has been ripped by that pocket is also displayed between the blades graphics. The middle of the screen has a group of touch buttons used to initiate programming. These buttons are described in detail on the following pages. The lower portion of the screen is dedicated to informing the operator about the system's status and accumulative totals. Included in this information is a timer box that displays seconds and a communication port box that shows outgoing and incoming data streams.

Hasko Model HSLS with Haskan Width-Optimizing-Laser Scanning System *And* Bow-Buster

SPECIFICATIONS:

ELECTRICAL and PNEUMATIC SPECIFICATIONS

Multi-Strand Chain Scan Deck Feed Drive	Via Drop Down Chain Drive on **Hasko HSRF**
Busting Saw Arbor Motor	10 H.P. ODP 3450 RPM "V" Driven Saw Arbor
Laser Light-Line Servo Motor	Baldor
Laser Light-Line Servo Controller	Baldor Mint Drive
Laser Light-Line Operator's Manual Controller	Joystick or dual (left/right) push buttons
Laser Fence and Second Stop Actuation	Pneumatic Cylinder
Busting Saw Actuation	Pneumatic Cylinder
Busting Saw Clamp Actuation	Pneumatic Cylinder
Total CFM Requirements for (2) stops and busting saw	Approximately 25 CFM
Electrical Panel	NEMA 12 Pre-mounted
System Electrical Requirements -**HSLS** Only	460 Volt-60 Cycle-3 Phase Standard - 50AMP
System Electrical Requirements -**HSLS** and **HSRF**	460 Volt-60 Cycle-3 Phase Standard - 80AMP

CAPACITIES:

Thickness	1/4" - 2-1/2"
Shortest Material	2'
Longest Material	16'
Widest Width that will pass through machine	27"
Maximum Scanning Width	24" on straight boards
Busting Saw Blade Size	18" X 1" bore
Widest Material that can be busted	12" approximately
Cut Location of Busting Saw	About 7' from even-end
Estimated Weight	9,800 #
Foot Print (Length x Width)	17' X 6.5'