

Bargstedt Intellistore Storage & Retrieval System

Machinery from Bargstedt is extremely rigid and low maintenance. Bargstedt manufactures heavy-duty machines specifically built for continuous operation, 3 shifts a day, 7 days a week, 365 days a year with a minimum amount of down time. Bargstedt machines will continue to function as intended year after year withstanding heavy-duty industrial usage.

Our systems offer:

- increased productivity
- decreased dependency on manpower
- more consistent product produced – fewer production mistakes = less waste, more \$\$\$
- less damage to parts during processing
- less job related injuries, workman's compensation and OSHA claims

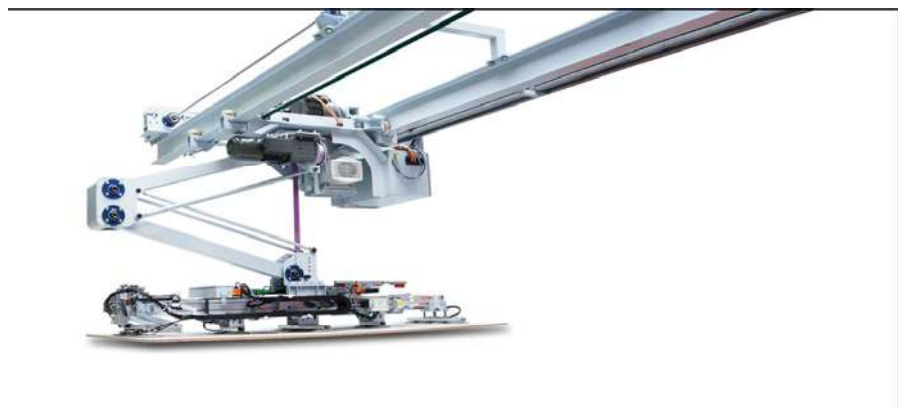


Bargstedt Intellistore, Model TLF 210 Profiline

Storage area 8.0 meters x 15 meters (Approx. 26-1/1' x 49')

Bargstedt Intellistore Features & Benefits

- **No time lost looking for boards:** location of every board is always known
- **Reduced inventory:** 100% inventory knowledge enables just-in-time purchasing
- **Reduced Storage Space:** by keeping only the necessary materials on hand
- **Automatic size & weight recognition** for each board
- **Automatic separation (suction) parameters** stored for each board type
- **Intelligent learning:** parameters can be set-up to change priorities of boards stored inside the system
- **External Storage Management:** manages boards stored outside the system as well as off-cuts
- **No more damaged boards** by handling misuse from employees
- **Lights Out Pre-sorting** or bringing in new inventory
- **New Woodstore 5.0:** 3D optics with matching décor photo for each board
- **Bargstedt Intellistore is the Master:** it determines what boards can be picked the fastest and changes order sequence if necessary
- **Reduced storage space:** order and store only the quantities needed for production
- **Supplier verification:** the supplier and date of supply is known for every board
- **Increased machine capacity:** the storage and retrieval system always gives top priority to feeding the machine so no time is lost while the operator is searching for the right boards



Technical Specifications

Panel Dimensions

min. length	2000 mm	(78-3/4")
max. length	4200 mm	(165")
min. width*	800 mm	(31-1/2")
max. width	2200 mm	(86-1/2")
min. thickness (particleboard)	12 mm	(1/2")
min. thickness (MDF)	16 mm	(5/8")
max. thickness	40 mm	(1-5/8")
max. weight per layer	250 kg	(551 lbs)
max. stack height inside storage area*	2100 mm	(82-3/4")
max. stack weight	5000 kg	(11023 lbs)
stack dimensions min.	800 x 2000 mm	(31-1/2" x 78-3/4")
stack dimensions max.	2200 x 4300 mm	(86-1/2" x 169")

* *Note: This is the total stack height. If the customer uses elevated floor supports to sit the material on, then this subtracts from the overall stack height. For example, 50 mm high floor supports means 2050 mm of actual stored material in each position.*

- stack arrangements are one row with one piece per row maximum
- material to store and retrieve – must be raw, plain, lacquer, veneer, laminate, or coated, also must be clean, separable (with vacuum carriage) and non-porous
- edge material must be raw, veneer, PVC, melamine or paper
- the workpieces must not be cupped or twisted
- the workpieces must not be extremely bent or waved, and they must be parallel
- the admissible tolerance in board thickness of +/- 0.2 mm must not be exceeded
- under the stack can be a base board if needed

Material Flow

- raw board stack supply via a fork lift truck
- base boards are stored inside the system
- cover boards for light-sensitive material

Off-Cuts

- off-cut returns in the storage area via the stack infeed position or at the back of the Holzma saw (if used)
- minimum off-cut size is 2000 X 800 mm (78-3/4" X 31-1/2") for re-storage
- additional off-cut storage can be administered manually



Operating Machines Within the System (not included in this proposal)

None

Optimization Software

Cut-Rite

Basic Construction

- main frame, fixed on the hall floor
- movable unit for the transport of work pieces
- positioning accuracy +/- 35 mm
- pneumatic connection: 6 bar
- thickness of floor: 220 mm (8-3/4")

Bargstedt Intellistore Solution

Bargstedt TLF210 Profiline

For continuous handling (storing and retrieving) and inventory control of boards.

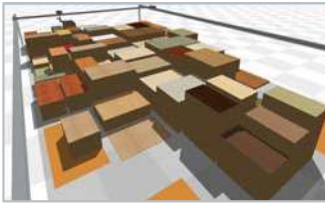
Technical Specifications (Servo for TLF 210) #5913

- higher positioning accuracy
- +/- 5 mm from layer to layer but maximum +/- 10 mm on total stack height

driving movement, carriage (x-axis), frequency regulated	110 m/min	(360 ft/min)
lifting movement (z-axis), frequency regulated	45 m/min	(148 ft/min)
driving movement, bridge (y-axis), frequency regulated	130 m/min	(426 ft/min)

Standard Features including Software & Hardware

- includes vacuum carriage, moveable on the main frame, and with suction cup device which is automatically adjustable to workpiece length
- lifting device with vertical scissor guide
- automatic management of cover boards and protective boards
- PC-based electric control according to IEC 61131, located in a switch cabinet, which is mounted directly at the station
- all panels are stored in locations corresponding to their allotted portion of the overall production



- the integrated permanent analysis of the storage process evaluates the panels based on adjustable criteria
- if necessary, the priority of the panel is changed
- the variable flexible allocation of panels to storage locations is based on panel priority and applies to the further storage process
- TLF Power Control WoodStore 5.0
 - 3D optics
 - matching décor photo for each board
 - virtual view of all storage positions
 - automatic pre-stacking
- hardware
 - industrial PC with embedded Windows XP
 - TFT flat screen with PC keyboard and mouse
 - digital field bus system for infeed/outfeed and peripheral units
- network connection Ethernet via additional card and network software
- virus protection
- software
 - operator menu-guided with Windows standard
 - software kit WoodStore storage control Profiline
 - on-line connection Ethernet to Holzma saw for data transmission
 - stacking time recording – the stacking time for each panel will be stored on a data bank
 - supplier identification of each board will be allocated
 - software connection to AV-system Ethernet
 - includes two (2) user licenses
 - network protocol Ethernet
 - using of the international standardizing protocol TCP/IP
 - it is possible to produce statistical data at each connected station to network

Additional Features – Included in this Proposal

- manual swivel door for protective fence (#0823)
- protective fence – Provided by Stiles
- air conditioning for control cabinet (#6087)
- storage management in inch instead of mm (#6422)
- angle correction system (#5916) – needed to correct the X & Y coordinates; an angular adjustment of the workpieces is affected through new measuring technologies
- installed according to UL specifications (#6015)
- ten (10) additional meters of electrical wire for future length extension and/or switch cabinet repositioning (#6071)
- two (2) interfaces to Homag group machines (#6019)

Additional Features – Included in this Proposal (continued)

- two (2) emergency disruption interlocks – includes 30 meters of cable (#6021)
- one (1) additional user license for display at machine (#6409)
- separate safety area for board drop-off position – Quantity of 1 (#5934)
- workpiece measurement (#5911) – positioning correction system for X & Y direction
- automatic weight recognition (#5909) – weight of each panel is verified during pick-up and for an optimal separation function
- suction cup device motorized adjustable (#5905) – the traverse is motorized with length adjustment of the suction carriage
- separate safety area (#5934) – additional protective fence for the drop-off position (#5917) – entry is possible after acknowledgement of machine
- Divided safety area (#5932) – enables full function of one machine during downtime of the other machine, for example maintenance. Machine has to be on and must be connected to saw
- data back-up on second hard disc (#6135)
 - data back-up via USB hard disc
 - through this, the whole operating system of several machine PCs could be secured
 - with the installed software, PC installations could be reset after exchange
- network cable Ethernet – basic execution (#6068)
 - 25 m cable UTP/S Cat. 5 twisted pair for network Ethernet, including plug RJ 45
 - cable arrangement by the customer
- software and connection for bar code scanner (scanner not included)
- tele-service-net (#8740)
 - remote diagnostics via tele-service net instead of modem, for a quick, low-cost and reliable remote service
 - service telephone (VoiP), telephone connection to the Homag Group without charge
 - the services and fees of the remote diagnostic are ruled in a separate tele-service contract
 - tele-service net on the machine offers additional e-service possibilities
 - a separate internet connection and one (1) customary telephone line to be provided by the customer
 - bandwidth of min. 256 kbits upstream and 256 kbits downstream is required
 - in case of deviation of standard connections (DSL, ISDN) additional costs may result for project planning; the price is determined according to expenditure, and the customer has to stipulate if the connection will be DSL or ISDN

Additional Items Included:

One (1) Storage Loading Position with Frames (#5917)

Description:



- length = max. 4200 mm (165")
- stack supply via fork-lift truck
 - three (3) individual steel structures to mount on the hall floor
 - four (4) individual stop positions to mount on the hall floor
 - one (1) manual locking brake
 - one (1) safety light barrier with manual acknowledgement
 - one (1) protective fence device to protect the storage position
max. stack height of 1000 mm (39-3/8")
 - max stack weight of 5000 kgs (11,000 lbs)
 - stack dimensions, min. 2000 x 800 mm, maximum 4200 x 2200 mm

NOTE: Check the stroke height of the fork lift truck with the clearance height of the support. The exact stack position on the storage place is dependent on the fork lift driver.

Additional Features for Thin Boards (#5907)

Features built into the vacuum unit to pick up thin boards.

Consisting of:

- self regulating vacuum system
- integrated weight measurement
- suction cups acting on the board corner
- improved sensor technology

Board Dimensions:

- chip boards raw, Standard E1
- thickness ≥ 6 mm (1/4")
- MDF boards raw, thickness ≥ 3 mm (1/8")
- minimum workpiece width – 800 mm (31-1/2")
- minimum workpiece length – 2000 mm (78-3/4") with maximum workpiece length of 4100 mm (161-1/2")

NOTE: For any deviations regarding material, workpiece thickness, and material density, the customer must provide test material according to our requirements for tests prior to placing order! If we do not receive any test material, we do not assume any liability for possible failures in production.

Turning Drive – 90 Degrees (#5914)

Vacuum head can turn 90 degrees to place boards or to pick up boards.

Safety Light Barriers

- protection of passages and feeding attachment areas
- manual acknowledgement

No-Break Power Supply (#6009)

- in case of a voltage loss, the electronic control is provided with current from the installed batteries for approx. 10 more minutes
- all values and states are stored and the PC must be restarted
- the USV serves as a voltage stabilizer for the electronics in case of over voltage
- under voltage operation is switched to batteries
- capacity of USV is 1000 VA

Onsite Training - Storage Systems WoodStore (#8639)

- training for storage software Woodstore 5.0 – two (2) days onsite at customer's facility
- basic function and user interface
- configuration of storage places
- enter master data
- storage functions storing/removal/pre-removal
- production lists
- link-up to optimization
- stock data
- break and error handling
- special functions
- storage optimization/storage organization
- target group: machine operators for the Intellistore system
- qualification: basic knowledge in windows

Plant Installation Specifications

dock door requirements			
width	min.	3000 mm	(9.8')
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height of building	min.	3581 mm	(11' 9")
room temperature*		5°C to 35° C	(41°F to 95°F)
compressed air		dry, oil-free, filtered, constant min. 6 bar (87.02 psi)	
building floor		concrete floor with steel, thickness min. 200 mm (7-7/8") quality B25, surface level	

* Note: In instances with ambient temperatures in excess of 95° F, air conditioning is required for the control cabinets.

Electrical Specifications

working voltage	480 volts
control voltage	115 volts, 60 cycle
	24 volts DC
electric control	Power Control IEC 61131

- machine operation only with a universally sensitive residual current operating device
- electrical components wired according to UL standards; voltage supplied must not fluctuate in excess of +/- 5% of its stated value
- cable installation on floor (channel provided by customer) or 3300 mm (10.86') overhead in cable tracks (tracks to be provided by customer)

Paint Color

- machine: RDS 240 80 05 grey
- movable parts: RDS 240 80 05 grey
- switch cabinet: RDS 240 80 05 grey
- protective fence supports: RAL 7043 traffic grey
- accent color: Reflex Blue 50