LAADER BERG®

Equipment for Maxfoam™

LEAFLETS

- MCS – Maxfoam Computer System
- Multi-trough™
- Liquid lay-down traverse
- Laader Berg CO_2 system
- Conveyor sidewalls
- Sidewall tilt system
- On-the-fly
- Silicone mixer
- Pintomax™
- Squaremax™ RS
- Cutmax™ BC-250A
- Foamkit 2000 Laader Berg Edition
- New generation mixer outlet
- Machine Assessment

WE ARE
THE PARTNER

Choosing the right partner is a key success factor in business. And Laader Berg aims to be *The Partner* for polyurethane foam technology.

We work hard to establish and cultivate good chemistry with our partners from day one. We believe a close and lifelong partnership, built on trust and reliability, is vital if we are to deliver the best solutions and create success stories for our customers in the polyurethane industry. Every project and every customer is unique.

We offer a highly customized concept, consisting of consulting, engineering, factory setup and installation of high-performance, flexible foaming machines. We also provide first-class service and support throughout the machine's lifespan. As your partner, we are eager to explore opportunities with you and share our expertise to ensure that you are always one step ahead of your competitors in the market.

The Laader Berg brand is probably best known as the world's most widely used high-quality foam machines, and as the inventor of Maxfoam™. But what makes us most proud as a team is the feedback we receive from our customers all over the world, who tell us that we are doing things right. Such praise simply spurs us on.

Thank you for choosing Laader Berg.

New Generation Mixer Outlet

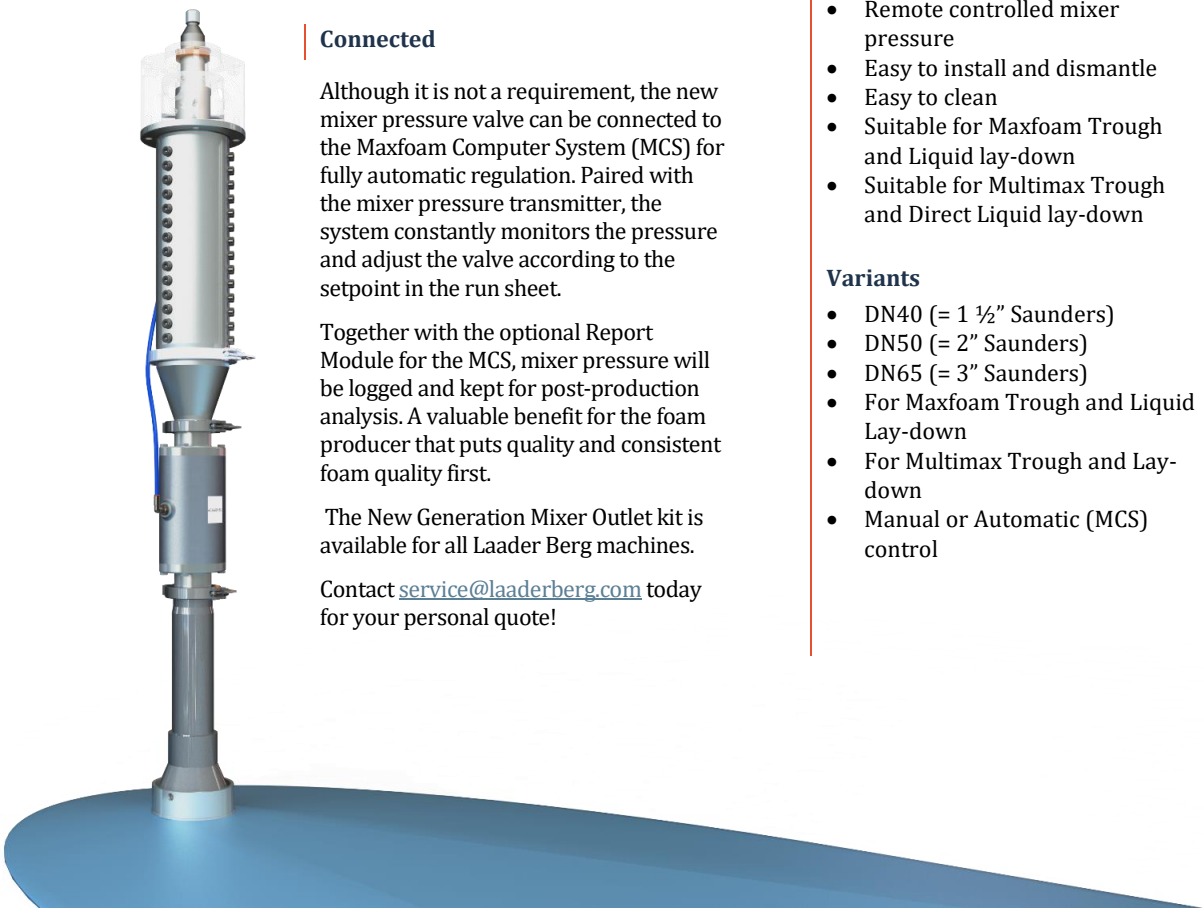
The newly developed mixer outlet kit consists of carefully matched components for optimum flow.

Prepared for production of comfort and technical foams with fine and homogeneous cell structure.

The new generation mixer outlet has been developed with premium foam quality in mind. From the early stages of product development our focus has been on flow optimizing and ease of use. Each component has been carefully designed and manufactured to provide unrestricted flow and elimination of turbulence.

With new "gap-free" quick acting couplings, the inner surface is smooth all the way from the mixer to the outlets. The result is an improvement in cell structure.

One of the new components is a pneumatic mixer pressure valve replacing the traditional manual Saunders valve. The flow characteristics of the new mixer pressure valve is superior and provides a wider range of pressure control than with the Saunders type.



Connected

Although it is not a requirement, the new mixer pressure valve can be connected to the Maxfoam Computer System (MCS) for fully automatic regulation. Paired with the mixer pressure transmitter, the system constantly monitors the pressure and adjust the valve according to the setpoint in the run sheet.

Together with the optional Report Module for the MCS, mixer pressure will be logged and kept for post-production analysis. A valuable benefit for the foam producer that puts quality and consistent foam quality first.

The New Generation Mixer Outlet kit is available for all Laader Berg machines.

Contact service@laaderberg.com today for your personal quote!

Features

- Mixer Chamber
- Pin Stirrer
- Mixer Outlet
- Matched Pipework
- New Mixer Pressure Valve
- Gap-free connections
- Quick connectors

Functions

- Reduces flow turbulence
- Reduces risk of local pressure loss
- Wider range of mixer pressure regulation
- Controlling of mixer pressure valve on the MCS.
- Compatible with both Low and High Pressure TDI

Benefits

- Improved cell structure
- Remote controlled mixer pressure
- Easy to install and dismantle
- Easy to clean
- Suitable for Maxfoam Trough and Liquid lay-down
- Suitable for Multimax Trough and Direct Liquid lay-down

Variants

- DN40 (= 1 ½" Saunders)
- DN50 (= 2" Saunders)
- DN65 (= 3" Saunders)
- For Maxfoam Trough and Liquid Lay-down
- For Multimax Trough and Lay-down
- Manual or Automatic (MCS) control

MCS – Maxfoam Computer System

The Maxfoam Computer System is developed with the highest focus on:
Safety, Reliability and Flexibility.

This is the main control center for the Maxfoam machine and consists of a sturdy industrial computer with touch screen, a PLC, Servo drives, MCS software and various external components. During foam production, the large touch-screen monitor(s) will show the formulation and other relevant information.

The machine operator has full control of the foam production and can easily make any necessary adjustment in a safe and controlled way.

In true Laader Berg spirit, the system is powerful and advanced, and designed for the operators' ease of use.

During production, adjustments are easily made; with the keyboard, the mouse or by simply using the touch screen. Formulations, total consumption and calibration data are available for print out at any time. Multiple user levels within the MCS, will ensure that sensitive information is not getting into 'wrong hands' or tampered with.

The PC & PLC are of industrial type that has proved its safety through industrial use over years. Bus communication towards all components. A printer can be connected to the PC for print out of formulations & reports. The Maxfoam Computer System is flexible and scalable, and future upgrades are easily implemented into the hardware and software. Open towards all industrial standard protocols. Compability towards tablets & smartphones.

MCS – Maxfoam Computer System

Maxfoam Computer System is equipped with:

- Automatic Mode for foam production.
- Manual Mode for testing and calibration.
- Automatic start & stop sequence control including automatic flushing.
- Production que, easy planning
- Formulation change.
- Automatic Optimize function to fine tune parameters during production.
- Flow deviation monitoring with seperate warning and alarm limits for chemical outputs.
- Machine parameter monitoring with warning and alarm limits.
- Sequence control delay for opening and closing of individual recirculation valves.
- Formulation database with explorer function for easy and quick overview.
- Temperature indication of main chemicals.
- Pressure indication for all metering pumps.
- Prepared for LP-TDI and HP-TDI mode.
- Prepared for liquid CO2 mode.
- Prepared for remote support.
- UPS to secure power supply to the Computer and PLC in case of power loss.
- LAN card for connection to the customers xDSL/ISP line (ISP - Internet Service Provider). This enables remote support by Laader Berg's service department.

- *(option)* Output for a second touch screen monitor
- *(option)* Report Module - A fully integrated production log with all parameters.

MCS will set the following values according to the formulation:

- Pump outputs
- Conveyor speed
- Trough & fall-plate positions
- Mixer speed

MCS will show the following information:

- Date and time
- Conveyor speed
- Mixer speed
- Mixer pressure & temperature
- Pouring time
- Block height
- Pump output, per minute
- Foaming length, total
- Pump output, total
- Foaming width
- Pump pressure

MCS alarm system will monitor the following:

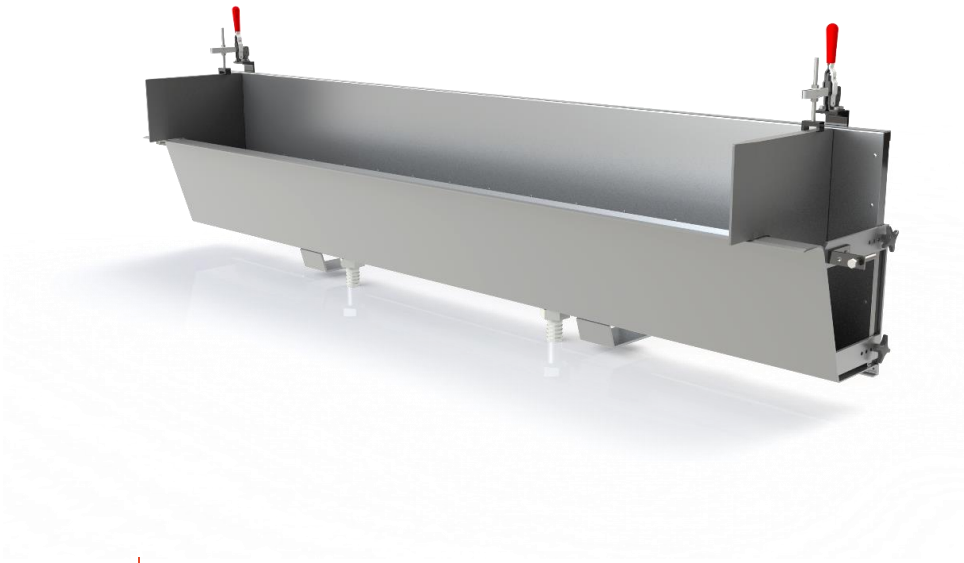
- Overpressure
- Low output
- High output
- System error
- Overload
- Inverter trip
- TDI index

Multi-Trough™

Multi-Trough™ with variable volume and width. One trough for many formulations.

Multi-Trough suitable for all Laader Berg Maxfoam™ machines ever produced.

Made out of aluminum alloy, the Multi-Trough is light, yet durable and rigid. The low weight makes it easy to handle for the machine operators.



Variable volume

The volume of the Multi-Trough is easily set by adjusting the position of the back wall.

Variable width

The foaming width is easily set by clamping the side-gables at the desired position. The trough covers all foaming widths from 1100 to 2470 mm.

Multiple inlets

Multiple inlets are available and are easily changed whenever needed. The Multi-Trough is delivered with 1", 1¼" and 1½" inlets as standard. These will cover most applications. 2" inlets are available as part of the HR-kit.

Easy cleaning

The PE-film covering the inner surface of the Multi-Trough reduces the cleaning to a minimum. When the production is stopped, the PE-film is removed and safely discarded. A new PE-film is then installed and the Multi-Trough is ready for the next production.

Specifications

The Multi-Trough™ comes in two different sizes:

- 19-23-26-30 liters/meter
- 33-40-46-53 liters/meter (std)

Trough no. 1 will give a volume of 39-62 liters at 2070 mm foaming width.

Trough no. 2 will give a volume of 68-110 liters at 2070 mm foaming width.
This is the standard Multi-Trough on all new Maxfoam machines.

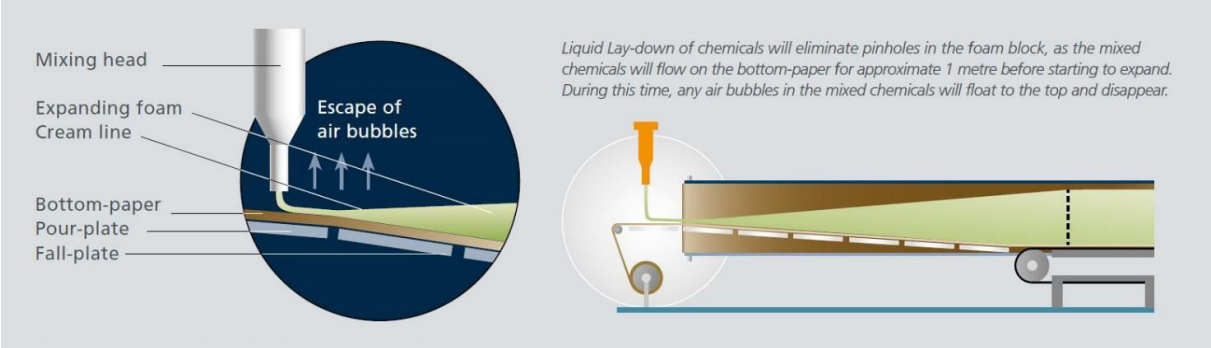
Easy cleaning means:

- Less exposure to chemicals for the machine operators.
- Short set-up time.
- Reduced usage of cleaning solvents.
- Longer lifetime.

Less trouble in foaming

- Clean trough for every foaming run! The PE-film makes the trough "as new" every time.
- No gassing from old layers foam or waxes.

Liquid Lay-down Traverse



For manufacturing special foam grades: technical foam, visco-elastic etc. Traverse unit for cyclic movement of liquid lay-down nozzle(s) above the fall plate. Liquid lay-down lets the air bubbles escape from the chemicals before creaming.

The liquid lay-down system is positioned at the upstream end of the foaming tunnel where the side and bottom-paper enters the tunnel.

The traverse consists of a reciprocating screw system driven by an electric motor. The speed of the motor, and thereby the traverse speed, can be electronically adjusted to get a smooth lay-down with soft turns. The traverse covers any foaming width between 1100 and 2470mm. The width of traversing movement will be set according to the required foaming width.

From the lay-down nozzle(s) connected to the traverse, the mixed chemicals are poured on to the bottom paper in a reciprocating movement across the foaming direction.

The traverse system can be adjusted in and out in the foaming direction to achieve the best possible lay-down position. Height adjustment of the lay-down nozzle is done manually before the foaming starts.

The twin lay-down nozzle system secure that the ready mixed chemicals are laid onto the bottom paper gently, without too high speed and splashing.

For production with less output and foaming width, a setup with a centered single nozzle is possible, still with full traversing function.

All machines, 50xx and Multimax, can be equipped with the traversing liquid laydown.

On Multimax machines, the chemicals are poured on the existing pourplate.

All other machines will have a separate pourplate installed in extension of the fall plate section.

The Liquid lay-down system consists of three main parts:

- **The traversing linear unit**
  Positioned at the upstream end of the foaming tunnel, creating the linear movement of the lay-down device.
- **The lay-down nozzle(s)**
  Fixed to the traverse, and positioned just above the pourplate. Can be configured for single- or double-nozzle lay-down.
- **The pourplate**
  Connected in extension to the first section of the fall plate. Adjustable angle for optimum lay-down flow pattern.

Laader Berg CO_2-system

Every Laader Berg foaming machine, new or old, can be equipped with Laader Berg CO_2-system for production of low-density standard foam with premium quality and soft touch.

The Laader Berg CO_2-system is based on the well-known sieves technology, the industry standard for liquid CO_2 based foaming, and will facilitate the production of low-density polyurethane foam without the use of Acetone, Methylene Chloride or other CFCs. From 14 kg/m³ and up, this system will produce premium quality foam with excellent cell structure, by using liquid CO_2 as blowing agent.

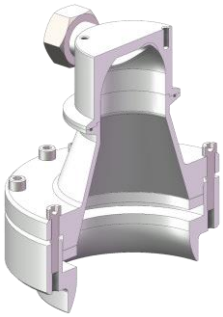
The CO_2-system for Maxfoam™ or Multimax™ machines is equipped according to the strictest demands for high standards and quality, and is mechanically ready for production after installation and connection to the electrical mains and compressed air, and to the client's supply lines for Polyol, TDI, CO_2 and Nitrogen.

A complete CO_2-system consists of the following:

- Polyol HP metering unit
- HP TDI metering unit
- HP CO_2 metering unit
- Nitrogen controller unit
- Static mixer for Polyol and CO2
- Static mixer for TDI and Nitrogen
- Special final mixer for CO_2, with foundation
- Outlet nozzle with corresponding sieves package and structural framework
- Backplate for installation over the first fall-plate

The liquid CO_2 is used to mechanically create a froth that is further supported by the chemical reaction between Polyol and ISO and Water and ISO. The CO_2 is kept at a constant pressure of 17 bar and -25°C in the tank, and accurately metered into the Polyol stream and pre-mixed in a static mixer. This mix is kept under pressure when mixed with additives and TDI/Nitrogen mix.

After being mixed in the specially designed CO_2 dynamic high shear mixer the compound is led through the pressure release nozzle. Here the pressure is gradually reduced to atmospheric pressure and the trapped CO_2 will instantly create the initial froth.



Features

- Mixer portal for hanging mixer with manifold and local piping
- Special final mixer with variable speed and Mesamoll barrier chamber
- Mixer lubrication pump system
- Metering pump for HP Standard Polyol
- Metering pump for HP Polymeric Polyol is optional
- Metering pump for HP TDI with flowmeter
- Metering pump for liquid CO_2 with mass flowmeter and injector
- Mass flow controller and injector for Nitrogen
- Static mixer for Polyol and CO_2
- Static mixer for TDI and Nitrogen
- Laader Berg lay-down nozzle for sieves
- Sieves package for standard polyol
- Sieves package for polymeric polyol is optional
- Telescopic backplate
- Additive metering units according to customer needs
- High pressure filters
- Local piping at mixer portal
- Electrical parts for connection to electrical system
- Mechanical parts for installation
- User manual
- Spare parts

Benefits

- Eliminates the use of CFC's
- Industry leading technology
- Environmentally friendly
- Premium cell structure with soft touch
- Easy to implement in MCS (Maxfoam Control System)

Specifications

- 22 kW mixer motor and drive
- Single Ø155 mm outlet nozzle design
- Free inlets for additional polyols and additives

Conveyor Sidewalls

All new Laader Berg® foaming machines can be equipped with full length Conveyor Sidewalls.

The aluminium slats, which are of similar type as used on the bottom conveyor, are attached to conveyor chains running on guided tracks in the side wall framework. The slats are designed to create a smooth surface of the wall, leaving no visible marks on the foam sides.

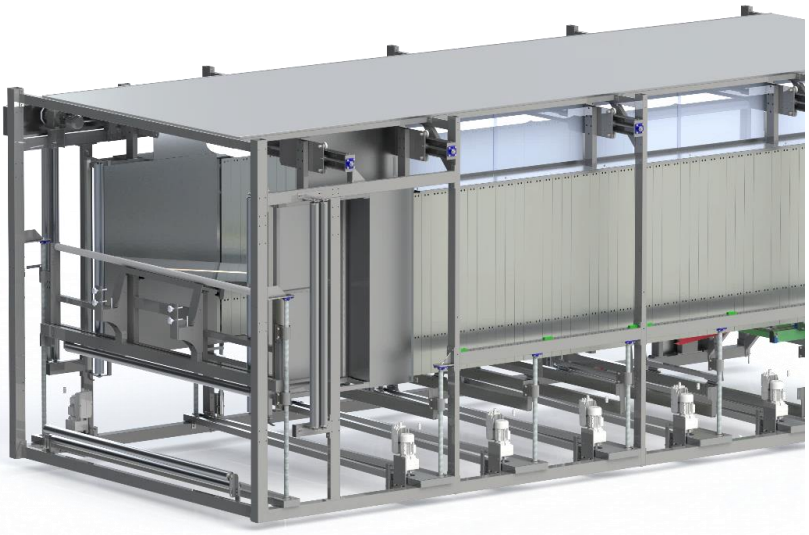
The conveyors are driven by separate variable gear motors controlled by frequency inverters. The speed is 100% synchronized with the main bottom conveyor by encoders with perfect precision.

From the adjustable tunnel inlet until the tunnel outlet there are continuous smooth side conveyors that supports the foam, making it possible to use PE-film without paper on the sides. However, we recommend using peel-able foaming liners for maximum yield and uniform foam properties.

Compared to fixed walls, where paper of poor quality can have a risk of tearing, the conveyor sidewalls is a safer way of supporting the foam, especially with high density and hard foam, but also with very low densities.

Newer Laader Berg® machines with aluminium sheet sidewalls are designed with the possibility to have the conveyor sidewalls retrofitted to the existing tunnel framework.

The conveyor sidewalls can also be delivered with Tilt function to prevent cold-flow and On-the-fly system for changing foaming width during production.



Benefits

- Safer production with no paper tears.
- Easier to run high-density and hard foams, or very low densities.
- Smoother sides of foam block.
- Smoother running of side paper.
- Can be run with PE-film.

Specifications

- Synchronized with main bottom conveyor by encoder.
- Full-length sidewall conveyor on both sides of tunnel.
- Operation fully integrated in Maxfoam™ Computer System

Included

- Slats and conveyor chains.
- Sidewall framework.
- Synchronized motors.
- Frequency inverters.
- Electrical parts for connection to electrical system.
- Mechanical parts for installation.

Optional extras

- Tilt system.
- On-the-fly.

Sidewall Tilt System

With the motorized tilt-system the sidewalls can be angled during foaming, and compensate for the cold-flow effect. The yield improves due to less need for trimming the sides after curing.

Laader Berg® foaming machines with Conveyor sidewalls can be equipped with Tilt-system.

In formulations with low crosslinking, especially HR foam, cold flow can occur.
Although cold-flow may take place in the foam block already after gelation, its occurrence becomes visible a few hours after production.

Cold flow, as a phenomenon, is often more visible with high density and tall foam blocks, but can be present in all types of foam in various degrees.

Cold flow can be reduced by chemical in the formulation, often controlled or reduced by T9 and Ortegol, but such modification can also influence on some of the properties or cost of the foam.

The Tilt-system compensate mechanically for cold flow, by allowing the operator to adjust the angel of side conveyor during foaming. By experience, the operator will learn the optimum tilt position for each types of foam and formulation.

Visible quality improvements

- Less cold flow
- Vertical sides
- Less waste

ROI

- Less trim
- Higher yield
- More control

Specifications

- Vertical sidewall in fall plate section of conveyor.
- No transition gap between vertical and tilted conveyor due to continuous flexible conveyor.
- Up to 25mm sidewall displacement each side (0,8°)
- Tilt order is set from MCS Run Manager.

Included

- Motors
- Synchronization of tilt angle of both sides
- Frequency inverter
- Electrical parts for connection to electrical system
- Mechanical parts for installation

On-the-fly System

Adjust the foaming width during production with Laader Berg® On-the-fly system.

For new and old Laader Berg machines with Maxfoam Computer System.

All Laader Berg foaming machines have the possibility of changing formulations during a run. With the MCS (Maxfoam Computer System) it is easy to save and load formulations in the blink of an eye. The optional On-the-fly system open the possibility to also change the foaming width on the fly.

By opening the sidewalls slowly, the foaming width can be increased without compromising the quality of the produced foam still in the tunnel. Motorized width adjustment on the fall plates makes sure that there is no gap between the walls and fall-plates.

The process starts already at the bottom paper trimming unit with automatic width adjustment, that adjust the paper to the width required well ahead in time. This process delay is a one-time configuration at the control panel. When paper with new width setting reaches the foaming tunnel, the sidewalls start moving, with the fall-plates synced in motion.

Being able to change foaming width during productions reduces the need for stopping and starting the production, and by that reduces losses of start and stop blocks. The system also helps save time for machine preparation by reduced need for start-ups.

ROI

- No need to stop production for increasing foaming width.
- Less waste.
- Higher yield.
- More flexible production.

Specifications

- Advanced control of bottom paper trimmer based on foaming speed and width.
- Fully synchronized with foaming tunnel width.
- Operation fully integrated in Maxfoam™ Computer System

Included

- Bottom paper trimming unit with positioning sensor and automatic width adjustment.
- Fall plate section with automatic width adjustment.
- Interface / integration with the control panel.

Silicone Mixer

Every Laader Berg foaming machine, new or old, can be equipped with the Laader Berg Silicone Mixer for production of fine celled standard foam with premium quality and soft touch.

The Laader Berg Silicone Mixer is positioned close to the Silicone recirculating valve at the manifold, near the mixing head. The Silicone Mixer is suitable for both floor mixer and hanging mixer systems.

The compact mixing unit consists of a rigid frame, a high efficiency electric motor controlled by a frequency inverter and a mixer of special design. The mixer shares design elements from the original Laader Berg Maxfoam Mixer, but it has been constructed specially towards maximizing froth quality of surfactant and air.

By upgrading the Laader Berg Mixing System with the unique Laader Berg Silicone Mixer, maximum level of nucleation air can be increased – in some cases more than doubled, and still removing or reducing pin-holes. This increase of nucleation air will lead to a reduction in cell-size and give the foam surface a soft touch.

By installing the Silicone Mixer in-line with the existing Silicone stream, the installation is easy and flexible in use. One-way valves enable the operator to switch between air injection directly in the manifold or through the Silicone Mixer.

Technical quality improvements

- Increase in "PPI" (Pores Per linear Inch)
- Increase in "Elongation at break"
- Increase in "Resilience"
- Increase in "Tensile strength"
- Increase in "Support Factor"
- Small reduction in "Hardness"
- Reduction in "Compression Set"

Visible quality improvements

- Less or no pin-holes
- More even cell structure
- Less use of chemicals.
- Velvet touch

ROI

- More premium foam.
- Higher market value
- Competitive edge
- "No" running costs

Specifications

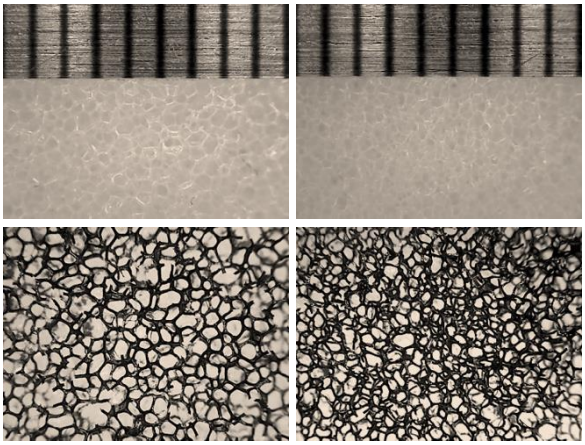
- Special mixer design
- Variable mixer speed
- Viscosity range, 500-2500 cps
- Weight, 55 kg (mixing unit)
- LxWxH: 440 x 280 x 480 [mm]

Included

- Compact mixing unit
- High capacity air rotameter or mass air controller
- Frequency inverter
- Alternative air injection system for manifold
- Teflon hoses for installation in existing silicone piping
- Electrical parts for connection to electrical system
- Mechanical parts for installation
- User manual
- Spare parts

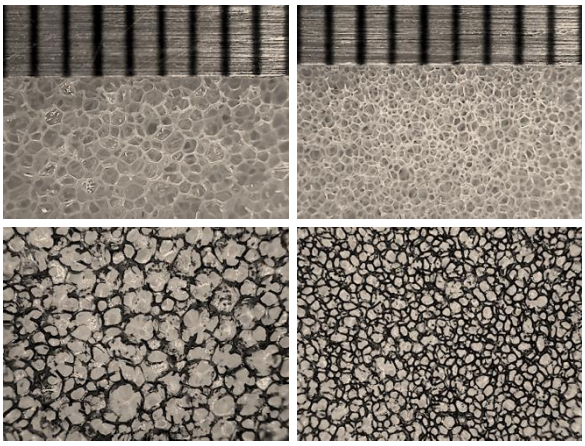
Silicone Mixer

14 density – 53 to 73 PPI = **38% increase!**



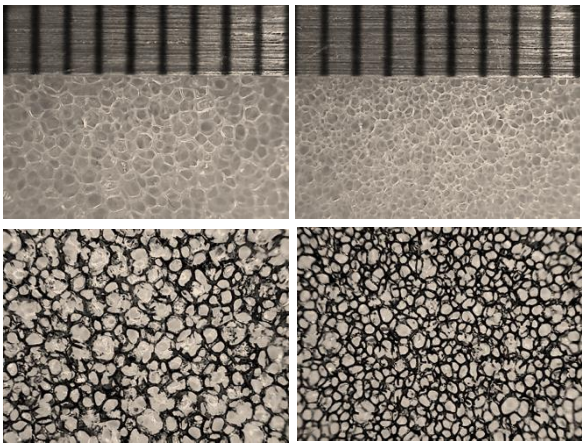
Airflow improved by **22%**

18 density – 65 to 115 PPI = **77% increase!**



Airflow improved by **65%**

28 density – 70 to 124 PPI = **77% increase!**



Airflow improved by **20%**

Instant improvement

- Premium low-pressure technology!
- Immediate results
- Foam quality instantly improved
- Possible reduction in overall catalyst levels

Easy to implement

- Two days installation – probably no stop in production needed!
- Two days running in
- Non or very little adjustment of formulations
- Easy to by-pass with the included air injection system for manifold

Flexible

- Fits all Laader Berg mixing systems
- Suitable for floor mounted mixer systems
- Suitable for hanging mixer systems
- Suitable for pre-mixer systems

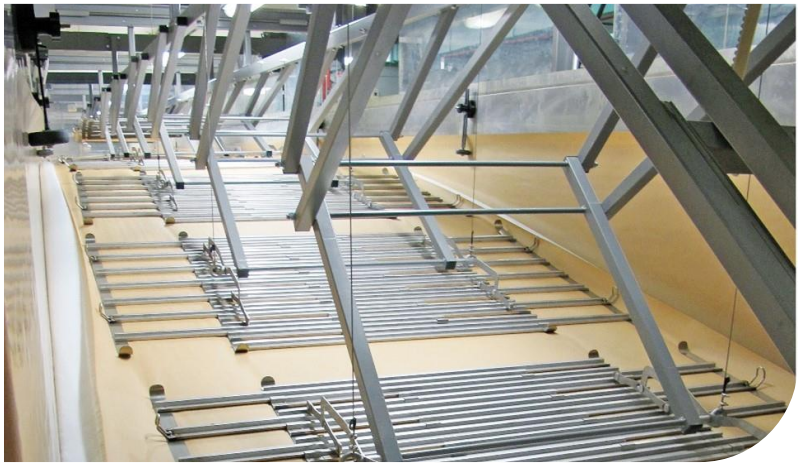
And customers are satisfied…

- *"…the silicone mixer is working very nice with very good results. We should have done this earlier"*

- *"…we have been working with the silicone mixer since the installation, and we are very satisfied now!*
  First; the cell structure is better, and the cells can be made smaller than before!! Second; the pin holes have disappeared!!"

- *"…silicone mixer is simply perfect. I'm asking myself how I did before ☺ We've tried many years having a hard foam with a smooth and soft touch, it was nearly impossible.*
  Now with the silicone mixer it's done. Thanks again for innovating and helping us to make it easier."

Pintomax™ CWP – Flat Top System



The Pintomax™ CWP system converts chemicals into more prime foam by optimizing the block shape. The rising foam block is pushed down on top to make it flat, by use of peelable paper, one dip roll and six counter weight plates.

Features:

- **Top Paper Support Rollers** - including brake, tracking adjustment and trimming unit.
- **Top Paper Feeding** - with driven rollers to automatically synchronize the top-paper/film with the rising foam.
- **Dip Roll** - at tunnel inlet for dispensing the top paper onto the foam directly after the Trough or Liquid Lay-Down. Electrically driven up/down- and in/out movement. Manual fine adjustment on one side.
- **Counter Weight Plates** – six stainless steel telescopic pressure plates, to control and shape the rising foam square and give optimum block shape.
- **Pressure and peg rollers** – to keep the top paper to the block.
- **Top Paper Rewind Unit** - for top paper rewind with torque controlled electric motor.

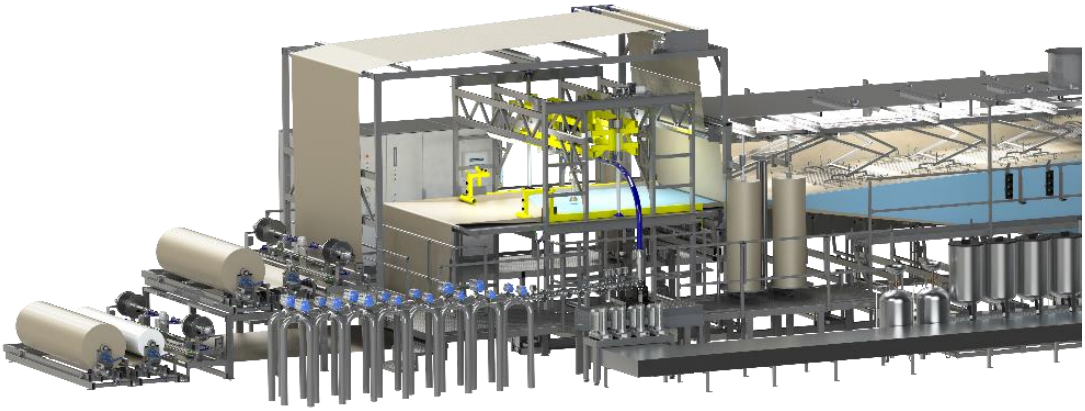
The top skin on a foam block is a result of collapsing cells on the top of the block, caused by rapid gas diffusion.

Benefits

- Pintomax™ CWP gives savings of up to 2,5 - 3,5 % compared to normal MAXFOAM™
- The top skin will be thinner and softer than without Pintomax CWP™.
- A fully covered block will let the chemicals react fully, making the foam properties more even throughout the block
- Pintomax™ CWP is suitable for both low blocks down to 400mm and for large blocks up to 1350mm. This makes the system suitable for both standard, VE and HR foam production.

Optimal use of chemicals

- 2,5 to 3,5% extra savings
- More premium foam
- Less use of chemicals
- Less top skin
- More even hardness
- Higher blocks
- Square blocks
- Higher yield



Squaremax™ RS – Film pulling unit

Functions

- Feeds film onto both sides of the block.
- Lifts the film during expansion of foam.
- Synchronized with conveyor speed.
- Full electrical positioning system.

Benefits

- Increases block yields.
- Achieve a square foam block.
- Easy to operate.

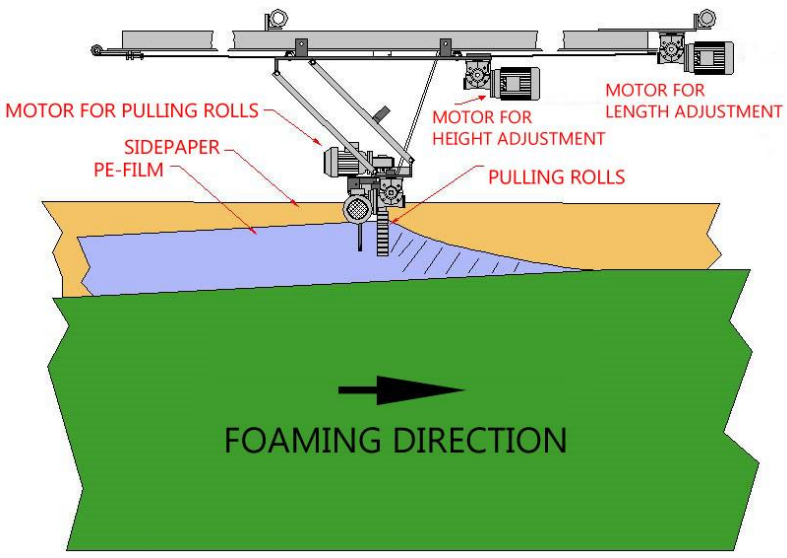
Gives savings up to 2,5% compared to standard Maxfoam™ blocks.

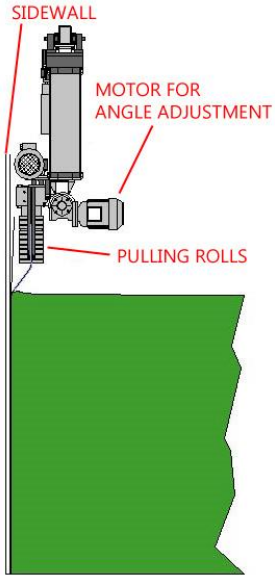
Equipment for pulling the top corners of the foam block upwards, to get a squarer block. The Squaremax™ RS film pulling unit consists of two pairs of pulling rollers, one pair on each side of the foaming tunnel. The pulling rollers are driven by variable speed motors and are synchronized with the conveyor speed. The angle of the rollers can be adjusted either automatically or manually.

Each pulling unit can be separately adjusted in height by means of electrical gear-motors by remote control. In the same way, each pulling unit can be adjusted in the lengthways direction of the foaming tunnel. A separate control panel for each pulling unit is located at the operator platform, and from this control panel the pulling-speed, the angle and the height can be adjusted. A selector switch for automatic or manual running is also located at this control panel.

This equipment gives best effect on block heights above 105 cm.

The savings by using Squaremax™ RS Film Pulling unit will be up to 2,5 % compared to the standard MAXFOAM™ blocks.





Cutmax™ BC-250A

A PLC controlled block cutter with adjustable traverse speed

Cutmax™ BC-250A is an automatic cut-off machine with vertical band knife for cutting the continuously produced flexible foam bun into blocks of required lengths.

The knife moves sideways across the foaming direction when cutting the foam. The cutting speed is adjustable, operated by a frequency inverter. To get a straight cut, the cross frame for the two knife wheels and the roller-ways moves on wheels at the speed of the foam block when cutting. Guide clamps on both sides of the machine will clamp the moving machine-section to the foam block when cutting, this to synchronise the cutting operation. The clamps are operated via air cylinders. An air cylinder will support the movement of the block cutter during the cutting operation and return the cutter to start position.

The machine is operated from a control panel close to the machine. The cutting operation can be started manually or automatically via a photocell.

The upper wheel with tension adjustment of the knife and the lower wheel with the knife motor run both on separate linear guide systems. The machine has an auto stop if the tension on the knife is too low or the knife breaks.

Cutmax™ BC-250A is equipped with folding rollers on both sides to avoid any gap between the foaming machine and the cutter as well as between the cutter and the acceleration conveyor.

Specifications

- Cutting height: up to 1350 mm.
- Cutting width: adjustable between 1250 and 2500 mm.

Optional Extras

- Acceleration conveyor with driven rollers.
- Block weight system
- Block counting
- BlockID™ print system
- Exit rollerway
- Sloping exit rollerway

Acceleration Conveyor

For short block production, the Acceleration Conveyor made for the Cutmax BC-250A block cutter is the natural choice.

The Acceleration Conveyor will quickly move the short foam block over to the next conveyor, or to the sloping exit roller way for manual handling.

The operation of the Acceleration Conveyor, controlled by the Cutmax BC-250A, will adapt itself to the cutting process.

Specifications – Acceleration Conveyor

- Width: 2525 mm
- Length: 1900 mm
- Speed: 28 m/min
- Connect up to three units

Specifications – Block Weight System

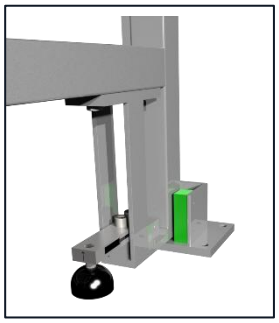
- Range: 10-900 kg
- Accuracy: ±0,1 kg
- Max block length: 1,6 / 3,5 / 5,4 [m]
- For 1, 2 or 3 acceleration conveyors

Block Weight System (option):

An optional extra for the acceleration conveyor. After each cut, the foam block weight is measured as it travels along the acceleration conveyor.

Photocells at the beginning and end of the acceleration conveyor ensures correct timing. The measured value will show on a digital display, and the value will "freeze" for a pre-set time.

The display will also show number of blocks and total weight of measured blocks.



Block ID™

Take control with full traceability. The automated printing and weighing system from Laader Berg will automatically move, weigh, and label the freshly cut block.

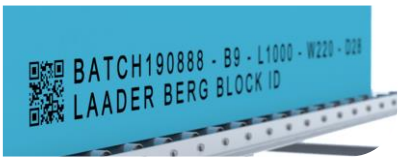
The Block ID system is designed to fit directly after the block cutter on the foaming line. The operation sequence starts once the block cutter finishes the cut and signals the system. The accelerating conveyor quickly moves the block onto the next conveyor, which is equipped with weighing cells, where the block will stop temporarily for weighing and printing. Once complete, the block continues to the sloping roller way for pickup.

For long block production, the Block ID system is designed to fit parallel to the foaming line, either directly before or after the block cutter. By receiving a signal from the block cutter, the print sequence can be automated to print each block one or more times.

Print head with traversing unit

- Standard 16 vertical nozzles.
  single- to two-line markings with a height of 5 to 67 mm.
- Option 32 vertical nozzles.
  single- to five-line markings with a height of 5 to 140 mm.

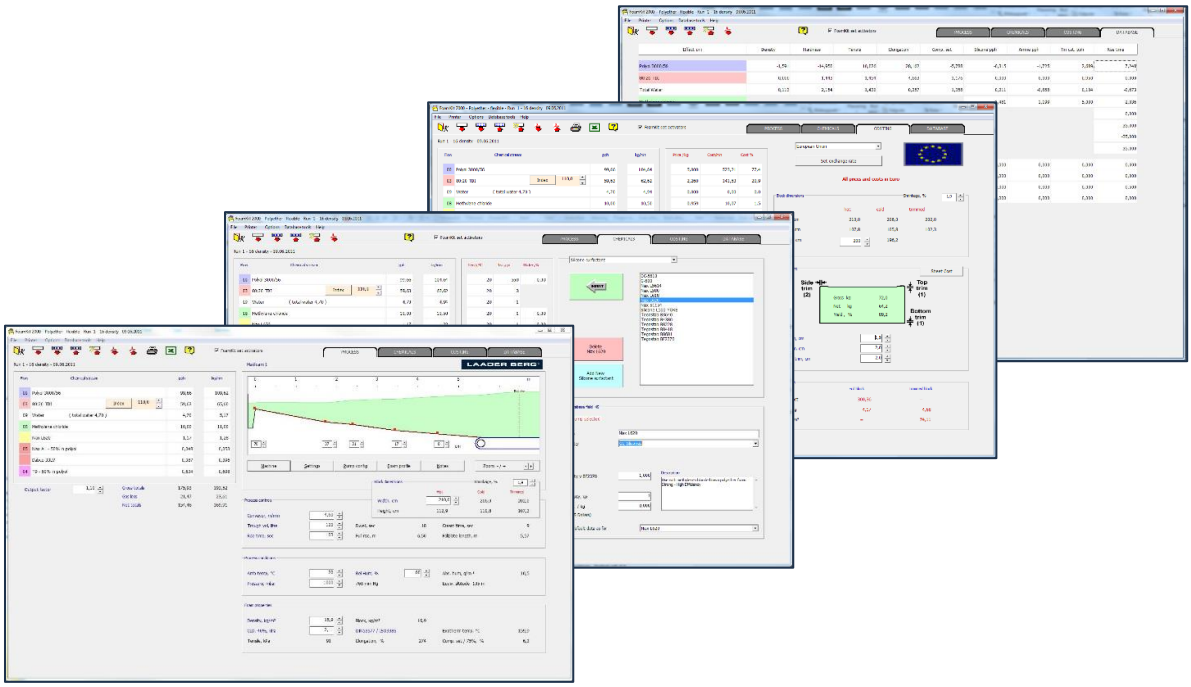
Examples of information that can be printed:	Source:
Block count number	(Block cutter)
Block cut length	(Block cutter)
Formulation name, SKU	(MCS)
Time/date	(MCS)
Batch number	(MCS)
Density	(MCS)
Foaming width	(MCS)
Block height	(Height sensor)
Weight	(Weighing cell)
QR Code	(By selected data)



Features

- Accelerating Conveyor after Block cutter.
- Conveyor with weighing cells
- Sloping roller way for easy block handling at the end of conveyors.
- Integrated weighing cell for blocks up to 3,0m length.
- Block height sensor to be mounted at the end of foaming conveyor
- Traversing print head. Prints on clean cut side of the block.
- Information exchange with MCS saves all information about blocks in SQL Database for reporting and data-exchange.
- Custom composition of information to be printed.
- 10,4" HMI touch screen for information and controls.
- LAN connection for remote service.
- Available for new and existing Laader Berg machines with Maxfoam Computer System 3.0

Laader Berg FoamKit 2000



Based on a powerful database, this foam prediction software contains all the formulation records, chemical information, machine configurations, chemical suppliers, etc.

Virtually no size limit - database expands to accommodate any new information. Huge capacity for thousands of formulation records and chemicals.

Chemicals

Chemical groups – Polyols, isocyanates, blowing agents, activators. Total of 12 chemical types, plus miscellaneous.
Add new chemicals, edit chemical data, supplier, price, etc.

Run Sheet - PDF format

Any formulation can be exported as a Run Sheet PDF file, which can be viewed or printed out using the free Adobe Acrobat viewer. The widely used PDF format allows Run Sheets to be easily transferred to another PC.

Costing

Calculates mix cost and foam cost. Calculates foam cost after removing trim. Select country and currency from a large list of choices. The costing report can be exported as a PDF file.

User preferences

Select metric or imperial units / temperature in Centigrade or Fahrenheit / hardness test method.

Calculations:

- Foam properties – density, hardness, tensile strength, elongation, compression set – for the current formulation
- Effect of atmospheric conditions on foam properties.
- Formulation for a required density and hardness
- Process parameters – activator levels, rise time, full-rise position
- Output values for each chemical stream
- Mix temperature and viscosity
- Exothermal temperature (gives warning if >165°C)

Machine Assessment

A full visual inspection of the Laader Berg foaming machine and block cutter.

Safe operation and maximum foam quality and yield are more than ever top priorities among foamers around the world. To make sure the machinery is up to date and fully utilized, Laader Berg offers a Machine Assessment where we compare the actual status of the machine with latest design and available options.

With more than 520 machines installed around the world, in companies of all different sizes, Laader Berg is an experienced advisor for; best practice, valuable options, industry trends, time saving procedures and new solutions with real pay-back. Our goal is to have the most satisfied customers!

The Machine Assessment is divided into three phases:

1. Two weeks before the assessment, the customer receives a feedback sheet for pumps and chemicals in use. This feedback is used to prepare the assessment template.

2. The on-site Machine Assessment. A senior supervisor/engineer from Laader Berg will personally inspect the machine and evaluate its condition. After the inspection he meet with the customers technical crew to discuss experiences, general or specific questions and the possibilities for quality improvement.

3. Two weeks after the visit a comprehensive Machine Assessment Report is prepared and sent to the customer. The report, focusing safety, technical and commercials aspects, includes a list of recommended upgrades and critical maintenance that should be performed. Budget prices for any suggested upgrades are available upon request and can be followed up by more detailed offers if needed.

The Machine Assessment Report is a solid document for documenting the importance of having an up to date machine, to ensure the safest and most efficient foam production.

We offer

- Senior supervisors/engineers
- Dedicated time on-site
- Proper follow-up, before and after the inspection
- Technical know-how
- An easy to read report in English

Included

- Pre-assessment data gathering
- On-site inspection
- On-site summary and technical discussion
- Comprehensive report
- Recommended upgrades
- Recommended maintenance
- Budget prices available upon request
- Detailed offers available on request

Price

- One assessment; EUR 2800,-

Not included

- Travel expenses
- Hotel and boarding

These are charged at cost price after inspection.