



*Hot Melt Roll Coating
& Laminating
Equipment*



*At Black Bros. Co. we are committed to the design and
manufacture of high quality machinery, with an
uncompromising attitude toward customer service*

More than a tradition

BLACK

Five generations strong

WHY BUY A BLACK BROS. ROLL COATER?

Discover the difference quality makes!

“Accurate Coating Weights”

- A measured coating weight variance of + or - 5% across the width of substrate being coated, saving you money each day of production!
- Coating Roll Dia. 11-3/4” or 7-3/4” Doctor Roll 10-1/2” or 6-1/2” made out of heavy wall steel tubing, which results in minimal deflection and a larger reservoir between the rolls (widths from 26” - 128”).
- Ground Bearing Journals on all rolls are ground within a +/- .0005 of an inch for precision fit to roll bearings.
- All Rubber, Chrome, and Steel Rollers are ground face length for a TIR (total indicated run-out) of .001 of an inch on the diameter across the face of the roll.
- Longer Rubber Roll life and much easier/quicker Coating Roll change because no need to disconnect Rotary Joints from Coating Rolls.



“Repeatable Gearbox Adjustment”

- Gear boxes for Doctor Roll Adjustment against Coating Rolls are highly precise with 1:1 ratio per turn, meaning the operator can have much more accuracy in the amount of coating being applied to the product.
- With the precise adjustment and digital roll opening indicator, you can dial in the accuracy to the nearest ten thousandth (.0000). 20 turns of hand wheel equals 1” of movement or .050” per revolution of hand wheel.
- Gearbox has greater repeatability, and durability, than competitive roll coaters.

Accurate Adhesive Application

“Efficient Heating System”

- Black Bros. uses 18 kW or 36 kW Heat Transfer Units with 1-1/2 HP pumps for standard machines. Heat up time is greatly reduced, due to the enclosed and simplified layout of piping.
- The heating system is mounted directly to the end of the unit, making it efficient and easy to maintain.
- Both Coating and Doctor Rolls can be internally heated; however, Black Bros. has hundreds of Hot Melt Roll Coaters in operation that have only internally heated Doctor Rolls. By heating only the Doctor Rolls, the Silicone Coating Rolls experience greater life span with less maintenance, which translates into more active production hours, and less maintenance costs annually.
- High quality “counter-flow” rotary joints (shown at right) eliminate the need to have rotary joints on both ends of the roller, which simplifies the overall design of the system. This reduces potential leaks and makes for much easier roll change, and streamlined maintenance.
- Because of all the built-in features of the Black Bros. heating system, the roll temperature will maintain a consistent + or – 5° F. across face of the roll.



Enhanced Visibility

“Tempered Glass Shields”

- Easy to clean 1/4” thick tempered glass, framed with 2” x 2” aluminum extruded tube, provides 3 times more rigidity, a tighter seal to keep fumes contained within the machine, and greater longevity of shields, when compared to competitive Plexiglas shields.
- All tempered glass shields are interlocked for operator safety and have an air lift for easy access.
- Tempered glass offers improved operator visibility.

STANDARD FEATURES

Large Diameter Rolls:

7 3/4" silicone application rolls, and 6 1/2" chrome doctor rolls. Heavy wall steel tubing, high tolerance ground bearing journals, and precision ground roll diameters to .001 inch across the entire face.

Efficient Heating System:

Heat transfer unit of 18 or 36 kW, with 1 1/2 HP pump. Doctor rolls are equipped with counter-flow rotary joints to eliminate the need for joints on both ends of the roll. (optional heated coating rolls)

Precision Gear Box:

Gear boxes for Doctor roll adjustment against the Application rolls are highly precise, with a 1:1 ratio per turn. Each turn equals .050", or 20 turns equals 1" of opening on the digital roll opening indicator.

High Temp End Seals:

Leak proof, high temp, solid Teflon® End Seals. Spring-loaded to compensate for roll expansion.

Variable Speed Drive:

A.C. Inverter type drive, with reverse lock-out. Drive motor is 2 HP, with speeds of 30-90 FPM.

Shields and Hood:

Interlocked tempered glass safety shields. Glass is 1/4" thick, set into a 2" aluminum extrusion frame, fitted tightly to the frame to contain the fumes, which are then removed through the upper hood. Air cylinders are used to raise and lower the shields.



Other Optional Features (not shown):

- 1) Minimum contact out-feed finger assembly.
- 2) Non-stick paint/coating of parts.
- 3) Industrial Teflon® coating of parts.
- 4) 3" air lift for upper roll assembly.
- 5) Riser base and/or in-line caster assembly.
- 6) Heated chrome application roller(s).

***Black Bros. will build a machine to
suit your unique requirements!***

Black Bros. Hot Melt Roll Coaters are designed to handle the increasing market demands for reactive hot melt polyurethane (RHM/PUR) adhesive applications. Other hot melt coatings include EVA's, waxes, dry lubes and many others. The cost savings can be tens of thousands of dollars per year, due to the accuracy of coating weights uniformly across substrates. The durable and efficient design lends itself to less maintenance and downtime, which also translates into increased productivity.

Proven Efficiency & Durability

775 – Hot Melt Roll Coater



(Photo Courtesy the Nordson Corporation)

Unloaders / Level Control:

Integration of drum unloaders, along with manifolds, hoses, and guns, are used in conjunction with a liquid level control to supply adhesive to the Roll Coater. The adhesive is automatically pumped from the drum to the machine on-demand.

Auto Elevator:

Thickness control at the push of a button. Two available options are 1) motorized push button raise/lower, or 2) value-input electronic raise/lower with pre-set stops (shown at right), and operator HMI (digital display).

Oil Supply to All Rolls:

Available option to supply oil to the application rolls, thus providing oil to both rolls in the set. In the standard configuration the oil supply is limited to the doctor rolls, for reasons related to maintenance and longevity of the silicone rolls.

Increased Roll Opening:

The machine can be custom built to support a 0" - 12 1/2" opening between the top and bottom coating rolls. Manufacturers of SIP and EPS panel constructions benefit by the extended opening height.

Operator Control Bars:

All machines come equipped with E-Stop Cables for emergency shut off. Upon request we can outfit the machine with Operator Control Bars, in addition to the E-Stop Cables provided. Ask your Black Bros. representative for details.

OPTIONAL FEATURES



Manufactured to Last

BLACK

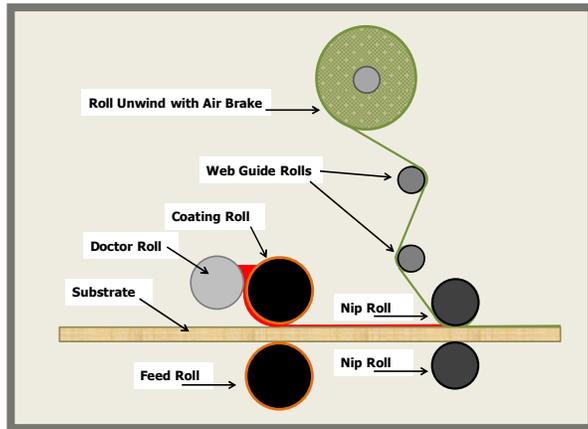
Serviced to Perform

UNIQUE APPLICATION FOR THE 775 HOT MELT ROLL COATER

In-Line Film Lamination!

Unwind Unit & Laminating Station:

Black Bros. has developed many ways to apply film directly to the substrate passing through the roll coater. This drawing shows a single film unwind unit. Other systems utilize multiple unwinds with air brakes for tension control.



The machine can be configured with an overlay laminating station. The lower roller is driven, while the upper roller can be adjusted for thickness. Both pressure rolls are 5" in diameter. Parts can also transfer to a stand alone rotary press (as seen on the opposite page).

This configuration is suited for a wide variety of coil stock, whether it's paper, vinyl, polypropylene, etc. Systems can also be designed to handle both coil and/or sheet stock. Contact your Black Bros. representative to pursue a solution for your unique application.

CUSTOM MACHINE FOR INDUSTRIAL APPLICATIONS

C-1175 Hot Melt Coater

Built for more demanding jobs:

Black Bros. has engineered Hot Melt Roll Coaters for many demanding applications, in widths up to 128". The 116" unit to the right was installed into a Recreational Vehicle (RV) operation.

Known for their accuracy and durability, the Black Bros. hot melt roll coater is a superior machine that will deliver predictable results for years to come. Quality, durability, and unparalleled customer service is our promise to you!



Black Bros. is leading the way in Hot Melt laminating technology, providing machines, and engineered solutions to a broad range of industries, including:

- *Recreational Vehicle—RV*
- *Entry Door—Garage Door*
- *Engineered Wood Flooring—Carpet*
- *EPS Foam & Medical Seating*

Rotary Laminating Presses

AUXILIARY MACHINES FOR YOUR HOT MELT PROCESS

Rotary Presses



RL-750 Rotary Laminator:

The industry standard Rotary Laminator, ideal for laminating sheet-to-sheet materials. It is adept in many different applications, delivering bonding nip pressure of up to 2,000 pounds.

Common uses include nip and stack lines using a high-solids "fast-tack PVA" adhesive, solvent or water-based contact cements, and hot melt adhesives such as PUR, EVA, PSA, etc.

Standard variable speed drive, 0—6 inch standard opening, widths available from 26" - 68", with 7.5" O.D. resilient rubber, or chrome rolls. Web unwinds available for coil stock.

RPP-875 Rotary Pneumatic Press:

Designed specifically for versatility, durability, and performance. Black Bros. rotary pneumatic presses have emerged as the premier laminating machine throughout a wide range of industries.

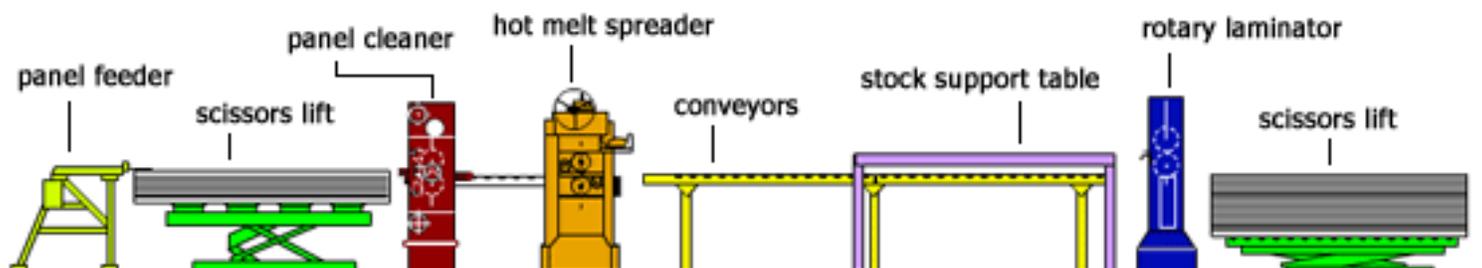
The standard machine has a single hand wheel to adjust for thickness, with mechanical indicator for repeatability, and a variable speed drive to match your other equipment. The total downward force generated is either 4,500 lbs. or 8,000 lbs. Other optional features are available.



TB-60 Laminator:

The TB-60 was developed for high volume laminating of coil stock product (predominantly paper & vinyl) to particle board and MDF. The TB-60 utilizes two thick walled, 13.8" diameter, oil heated rolls, with a hydraulic unit to generate glue line pressure up to 900 psi.

Used with hot melt adhesives the TB-60 can produce high quality surface resolution, especially on an MDF substrate. Systems are typically engineered to use fewer operators and more automation.



THE VALUE & COST SAVINGS OF BLACK BROS. HOT MELT ROLL COATERS



Is Your Glue Spreader Costing You Money?



Calculation Formula for Polyurethane Reactive Hot Melt

Situation:

Due to either machine maladjustment, or roll deflection, a roll coating process applies just 1 extra gram of PUR hot melt per square foot during production.

Formula:

1 Gram per sq.ft. = 2 lbs. of waste for every 1,000 sq. ft.

Calculation:

Based on 4' x 8' panels, all top and bottom coated — that's 64 sq.ft. per panel x an estimated 500 panels per shift = 32,000 sq.ft.

2 lbs. of adhesive waste x 32,000 sq.ft. = 64 lbs. of adhesive waste per day.

The cost of that adhesive @ \$3.10 per pound = \$192.00 per day.

Multiply that by 230 working days per year and you get a staggering cost of:



\$44,160 annually

You're consuming too much!

Schedule a FREE Lab Trial to see the difference quality makes!

INVEST with Black Bros. and realize Your SAVINGS



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