

UNION HOT MELT ROLLER COATER/ROTARY LAMINATOR COMBINATION MACHINE



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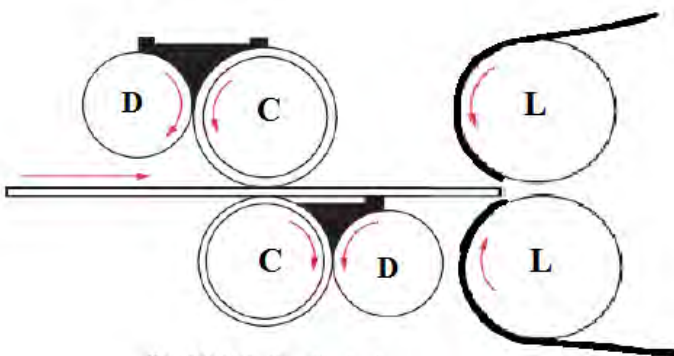
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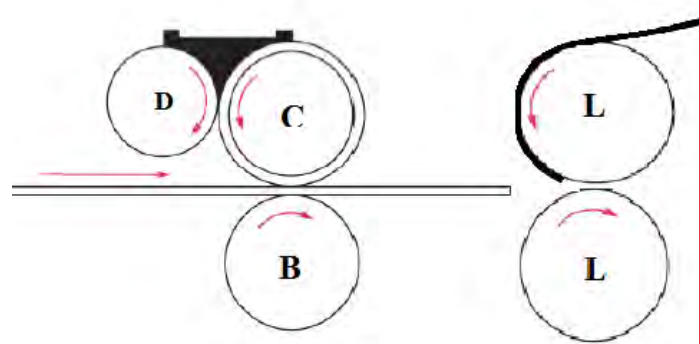
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Pictured above is Union Tool's Series #15, 54" Union Hot Melt Roller Coater/Rotary Laminator Combination Machine. This machine combines a Union Hot Melt Roller Coater, Union Rotary Laminator, and unwind stand all in a single framework of one machine!

Used in a variety of different industries for many different applications, this combination machine will apply a smooth, precise amount of hot melt adhesive to the top/bottom/or both sides of various flat panel or web substrates. As the substrates are being fed into the machine, and the hot melt is being applied, the panel/ or web goes directly into the rotary laminator which has a roll of secondary roll material wrapped around the laminating roll(s). As the panel/web makes contact with the lamination roll(s), the secondary roll material is instantly applied to the coated substrate and is laminated together by the lamination rolls. The unwind stand mounted above the frame holds the secondary roll material. The diagram(s) below represents this lamination process:



Hot Melt Roller Coater/
Rotary Laminator
Combination Machine
(Model A)



Hot Melt Roller Coater/
Rotary Laminator
Combination Machine
Model C (Topside Only)



Pictured to the left represents an inside look (from the outfeed side) of our combination machine.

ROLL CONSTRUCTION: We construct our rolls so that we actually have a roll within a roll. The purpose of this is to recirculate the hot oil around the dummy roll, which is welded on the inside of the roll tube itself, instead of filling the entire roll with hot oil. This allows for more even heat and allows us to use a lower kilowatt heater.

HEATED ROLLS: Both the coating rolls and doctor rolls are heated. Heating all of these rolls allows us to maintain a more controlled temperature and compensate for the heat loss which naturally occurs while coating various substrates. Heat loss on the coating rolls will cause a variation in coating weights and force the user to apply heavier amounts of hot melt adhesive.

BEARINGS: All bearings are mounted on the outside of the slide plate which eliminates any contamination of the various coating materials to the bearings themselves. All bearings are filled with high temperature grease.

COATING ROLL COVERINGS: When coating surfaces which are uniform and flat, we are able to utilize steel coating rolls and steel doctor rolls. Where soft coating rolls are required to conform to the substrate surface, silicone-covered coating rolls are utilized in order to withstand the heat and provide the desired release characteristics. Our series #15 rolls are 6-1 2 in diameter.

SEAL PLATES: All seal plates are spring-loaded in order to compensate for the roll expansion which naturally occurs when the rolls are heated.

HOT OIL HEATER: The location of the hot oil heater can either be underneath the coating area or mounted vertically to either side of the machine. The Union combination machine requires no water cool-down for the hot oil pump itself. Both the hot oil heater and the hot oil pump are specifically designed for hot oil applications.



LAMINATING ROLLS: Standard Mechanical Neoprene Rubber is used for our laminating rolls. Our series #15 rolls are 6-1/2" in diameter with 1" thick rubber. Steel rolls may also be used.

UNWIND STAND: Included with our unwind stand is an air brake system for tension control, unwind shaft, core holders, and single handwheel control for side-to-side adjustment.

CONTROL CABINET: A control cabinet is furnished with each system and can be completely separate from the machine or attached to the machine on a hinged mounting in order to provide access to the machine. Interlocking of the hot oil pump and oil heater requires that the hot oil pump be on in order to activate the hot oil heater. A digital temperature controller maintains temperature while a second thermostat provides for a safety and automatic kick-out.

RELEASE COATING: A special release coating is sprayed over the painted surfaces within the coating area. This release coating provides a non-stick surface which in turn makes clean-up and maintenance simple and effective.

PLUMBING: All plumbing within the unit is insulated. All rolls and components are equipped with shut-off valves so that maintenance can be performed at individual components.

ELECTRICALS: Standard voltage is 240/480 volt, 3 phase with 24 volt controls. The mounting location of the push-button controls and gap adjustment wheel can be specified by the customer.

SAFETY: A safety cable wrapped around the perimeter of the machine will automatically stop the revolving rolls and fully raise the top rolls when activated. Window guards with magnet interlock system will also stop the revolving rolls if lifted out of place.

TESTING AND SERVICE: The Union Tool Corporation maintains a 54" hot melt coater on our floor for testing at all times. This allows all potential customers to test production size panels using their own materials and provides for first-hand knowledge of the various coating materials and the Union roller coater. This is done at no charge or obligation. Union Tool provides service after the sale to ensure customer satisfaction and maintain customer relationships which have kept us in business for 75 years.

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