EQ

Older problems:
- Banding exceeds inside stock edge, won’t reach outside stock edge; guard rails need spacers or laminate

How often the EQ feeds pellets when the glue pot is low
- Early versions, every 60 seconds
- Later versions, every 30 seconds

What does the blinking light indicates
- Done several glue feeds, but detected no cut cycle; or it is about to go into rest mode

Glue pot test is occurring, but pilot valve does not fire pellets into the glue pot
- If remove glue pot test hose, the pilot valve will still not fire
- Removed wire from pressure sensor; glue still doesn't feed
- Sensor adjustment process

How to adjust the temperature
- See Operators Manual

How thick glue should be on the dispenser wheel
- Not too thick, not too thin

How long of inactivity before sleep mode
- 18 minutes

Just bought machine, haven't used it yet, but the glue isn't feeding
- Warm up, then see if air is blown to the sense hose every 60 seconds
- Sensing occurs every 60 seconds, but no glue feed
- Disconnect pressure switch and wait for cycle
- When adjusting the solenoid wires to the plc, the feed action began
- Tightened all hoses and wires
- Seems to be sensing and feeding now
- Back to square 1; send replacement solenoid

Problem with the tape application
- First few inches of tape slide on the stock and don't stick well
- Discovered on his own that he was feeding the tape upside down
- Process to adjust proper slack
- Wobbly wheel can add intermittent tape tension

How to clean glue pots
- Contact manufacturer of brand of glue pellets for suggested solvents

Guillotine doesn't come out far enough
- Adjusted the cylinder arm and it's ok now

Back door so out of alignment, can't plug in the ac cord, and can't access the screen and buttons

New cut outs have since been added to the back door

Glue pot heating up too quickly, started smoking and spilling over
Temp screen indicated a setting of 10; means it was previously at 9; no explanation why it should be at 9
Successfully set it to 5

Glue pellets won't stop shooting in
If sense hose sealed completely, the pellets don't feed; when connected to full glue pot, pellets feed
Sounds like the pressure sensor is a little too +; see glue pressure instructions for how to adjust it a little more –

Guillotine pressure dropped to 2lbs
When air is disconnected and reconnected it went back to 6 lbs

Sometimes the tape bends rather than cuts
Adjust the front screws on the guillotine assembly

Temperature problems
At power up, sometimes displays 'warming up', but counter doesn't count and element doesn't heat
Other times displays 'warming up' and counter counts, but element still doesn't heat
If disengage the glue pot, lifts the element, reseats the element, and reinstalls the glue pot it finally heats up
At warmest point it doesn't melt the glue to the usual consistency
Adjusting from 5 to 6 to 7 even 8; makes no significant change
Glue pots are clean; no old or burnt glue
Inspect for suspect wires to and from the heating element

Glue pot began smoking and boiling over before warm up was complete
Temp display indicates setting of 6, OK for Dorus glue
Temp sense wire on the analog module was loose in its terminal
Reinstalled wire
Wires are secure; temp is set to 6; warm up counter is counting; glue still overheated at 16 or so minutes
Send new heating element
Installed new element; timer didn't start counting; pot overheated
Temp display indicated that it somehow got set to 10 again
Send eeprom and instructions
No change; counter didn't count and glue overheated
Temp sense wires were reversed at the analog module
Corrected wire placement; counting occurs within a few minutes after power up
All fixed

Knife blade has chinks; How to clean splashes
Blade is double-edged so can be turned over
Clean splashes by scraping with putty knife when pot is warm
Seems that the blade chips easily – they are carbide
Send cutter wheel
Cutter wheel was not flush with the blade
Tried to adjust the cutter wheel
How much side-to-side play is proper at bottom of guillotine

Not feeding glue
When black sense tube is unattached, the feed cycle is correct
Reamed the glue pot sense tube and now it works well

Guillotine arm does not extend all the way resulting in broken banding
Jam nut is secured with green loctite; not enough exposed shaft flat to loosen jam nut
Clevis is presently secured by only a few threads
Replace with inspected guillotine assembly

Several chunks missing from the knife blade
Considerable distance between the cutting wheel and the blade
Replace with inspected guillotine assembly

Amber light is very dim; display "warming up 0:00" for 15 minutes
Glue overheating
Send new control assembly with heating element and glue pot
Glue pot doesn't line up with the glue pot clamp
Overbending in the folding of the glue pot
Bend slightly back works great

Glue feed has begun doling only a few pellets at a time
Move white feeder hose up, baby powder the pellets for smoother flow

Machine isn't feeding glue pellets into the glue pot
Feed command would fire if the sense hose was removed from the glue pot
Feed hose misaligned with the blast hose in the magazine (customer fault)

The pilot holes in the rigging arms are not matching up in the EQ
Tight tolerances sometimes make it difficult (but not impossible) to feed the bolt straight through the cage/tube

Why do the outriggers slope some
Thought that the stop bolt was supposed to feed through the single pilot hole on the lead end of the tube
Add more detail to assembly instructions

The glue pellets aren't correctly moving into the glue pot
Manually activated the solenoid; confirmed that the air bursts occur, but no pellets from magazine into hopper
Had been adjusting the position of the white hose, and maybe it's too far away from the black hose

Can the glue be replenished faster than he is using it
Early versions, every 60 seconds – can be upgraded to 30 seconds with new program installation
Later versions, every 30 seconds
Need to establish expectations of feet-per-minute, feet-per-full pot, melt time of pellets

Machine is stating that the glue pot is not in place
Glue pot is missing its grommet and the clamp knob is also missing
Completed the warm-up cycle, pressed the Delrin switch and the warm-up cycle started up all over again

Went into rest mode before it even finished warming up
Eprom program error

Pellets bounce out of the hopper when fed from the magazine
Adjust position of feed hose or install screen lid for hopper

Guillotine will not work unless you tape a piece of wood to the front side
Adjust the screw on the delrin wedge
Adjust the lever on the guillotine sensor switch

Glue gaps under the banding and the guillotine will fire if the board is not pressed tightly to the black rails
See Herb Zach's video describing technique on our website

Banding tends to bow away from operator; as much as 3/16"
Band guide adjusted approximately 1 turn

Guillotine won't cut full stroke
Guillotine blade was damaged, blade was also installed backward

The heating element has failed
Logo was not receiving analog input from the element
Replacement heating element needed
Caution against kinks and broken strands

The machine is burning the glue
Temperature sense wire M+ was loose at terminal
Tighten and test again
Temperature setting of 0 or 4 results in overheating
Eprom program error

Trouble getting machine to recognize new gluepot
Adjusted the screws on the glue tray farther back
Bent the sensor arm to touch higher up on the gluepot body

Inconsistent pellet counts if fill pellets much above baffle; must stir pellets near baffle to enter feed area
Baby powder helps glue pellets

Glue pot has overflowed
Tested the suction of the sense tube; tests ok
The glue pot did not seal correctly with the sensing tube

Glue pellets won't feed
Feed hose is crimped and bent

Guillotine is erratic, sometimes fires when stock first engages the sensor; sometimes fires during middle of banding; sometimes won't fire when sensing trailing end of stock
Made bend adjustment to switch lever arm

Clogs in hopper extension and clogs in the pellet feed tube

Hopper extension clogs likely caused by extension touching the glue pot
Replaced feed tube with newer tube material

Do outriggers mount permanently?
Outriggers rest on their own weight

The glue pot warms up and burns all the glue even though it's turned down to 1
Eprom program error

Is there a way to speed up the fill rate
Eprom with 30 second program
Manually activate the pellet solenoid periodically

Running out of glue
Pellets had melted and clogged in his hopper extension
Ensure that hopper extension does not come in direct contact with the pot

Guillotine sometimes engages at the beginning of switch press and at switch release
Focus on sensor switch and lever arm adjustment

Pellets aren't reaching the hopper
Found some pellets lodged in the feed hose

Glue pot dispenser wheel won't contact board
One of the support screws in the element tray is missing; use 8-32x1/2 and 8-32 kep nut

Glue pot is not refilling
Kink in the transport hose was causing the pellets to fall back into the magazine

How to adjust glue level sensitivity
See EQ Service Instructions paper

Doesn't keep the glue pot full
Trying to run 64 ft in 5 minutes
Faster than the glue will melt even if we did feed pellets faster than 30 seconds
Customer says he can learn to stay within the machine's limitations, “worth it for the great bond”

Disconnected airlines inside
Glue pot sense hose was not connected to glue pot tube

Feed solenoid wouldn't fire even when the sense tube is detached from the glue pot
Q3 terminal was gripping insulation instead of wire conductor
Cannot get pellets to fire when adjusting connected sensor
Replaced switch; doesn't fire at all regardless of potentiometer adjustment
New version secondary regulator had turned off; no air for sensing bubble

Feeds pellets when glue pot hose is detached, but not when connected; glue pot tube seems clear
Adjust the pressure sensor switch

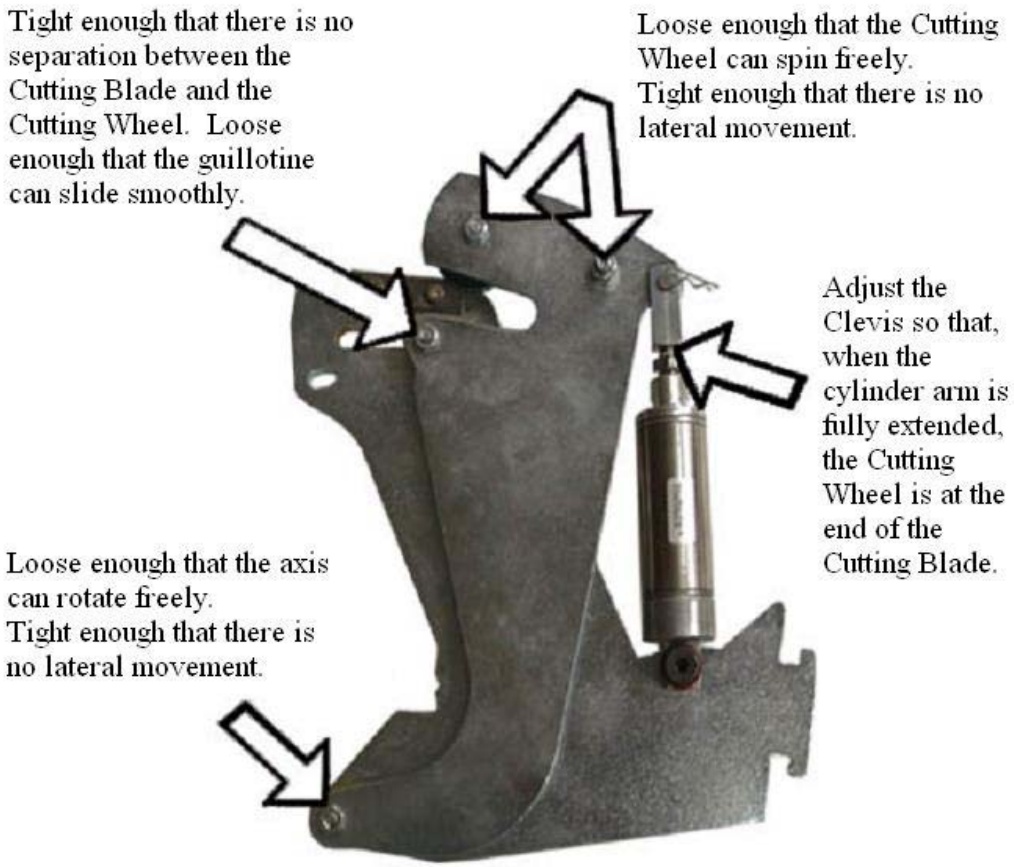
Guillotine won't fire at all

Little screw fell out of his Delrin guillotine activator

Replace guillotine blade

Open back door of machine
With 7/16 wrench remove the bolts holding the guillotine assembly in place
Disconnect air hose from cylinder
Slide guillotine assembly out from machine
Disconnect the screws holding the blade in place, replace blade
Make sure that the beveled edge sticks up above the metal and the bottom of the bevel edge is flush with the metal) Reconnect air, replace guillotine assembly bolt back into place.

Adjusting the Guillotine



Cutting Wheel: This should be adjusted so the wheel can spin with little force. The wheel should have very little (if any) lateral movement. To adjust properly, tighten the machine screw then back off ¼ turn. While securing the Phillips end of the machine screw, tighten the jam nut on the other side. Spin the Cutting Wheel. If the Cutting Wheel is too tight, loosen the jam nut, turn the machine screw $^{1}/_{8}$ turn CW, and re-tighten the jam nut. If the Cutting Wheel is too loose, loosen the jam nut, turn the machine screw $^{1}/_{8}$ turn CCW, and re-tighten the jam nut.

NOTE: the Cutting Wheel should NOT have a sharp edge; it is designed to roll over the banding so that the blade will cut the banding.

Swing Arm: The Swing Arm should move freely back and forth with very little lateral movement. The Swing Arm, when pushed forward and released, should fall back to the starting position. To adjust properly, tighten the machine screw then back off ¼ turn. While securing the Phillips end of the machine screw, tighten the jam nut on the other side. Manipulate the Swing Arm back and forth. If the Swing Arm is too tight, loosen the jam nut, turn the machine screw $^1/_8$ turn CCW and re-tighten the jam nut. If the Swing Arm is too loose, loosen the jam nut, turn the machine screw $^1/_8$ of a turn CW, and tighten the jam nut.

Cutting Wheel Alignment: The Cutting Wheel should slide back and forth freely next to the Cutting Blade without putting tension on the blade. Loosen the jam nut and the flat head machine screw. Tighten the flat head machine screw until the Cutting Wheel just touches the Cutting Blade, then tighten the jam nut. Manipulate Swing Arm back and forth. Watch the contact between the blade and the Cutting Wheel. If the Cutting Wheel sticks on the blade, loosen the jam nut, turn the flat head machine screw $^1/_8$ turn CCW, and re-tighten the jam nut. If there is a gap between the Cutting Wheel and the blade, loosen the jam nut, turn the machine screw $^1/_8$ of a turn CW, and re-tighten the jam nut.

EQ Specifications

Banding Material Width:	up to 1”
Banding Material Thickness:	up to 1.5 mil
Banding Material Bend Radius:	up to 1.25”
Maximum Stock Width	7/8”

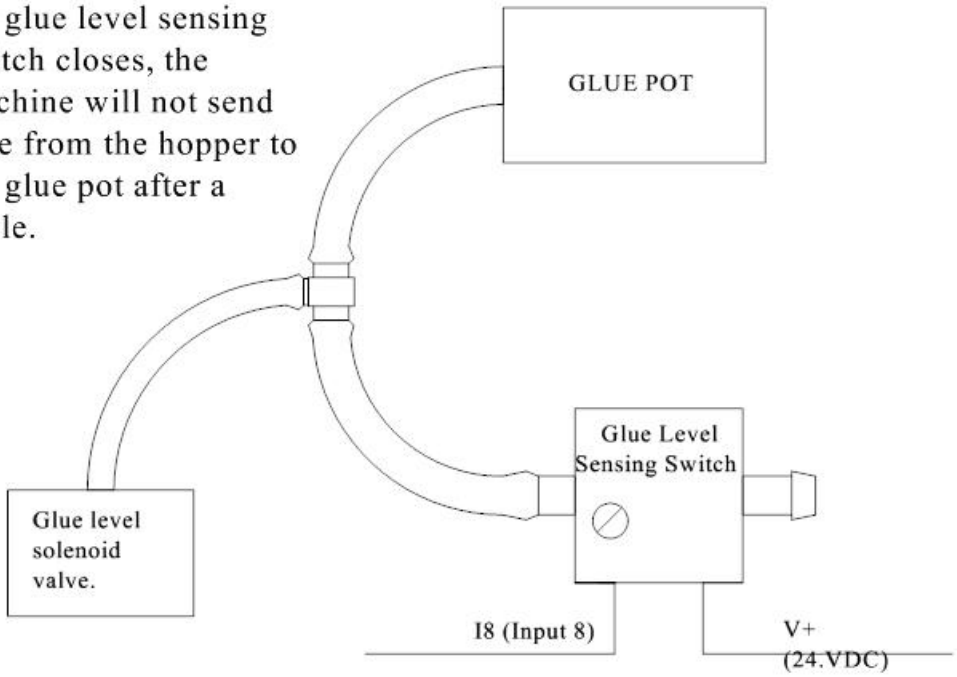
Recommend 1” banding for 7/8” stock
Recommend 15/16” banding for ¾” stock
Recommend 7/8” banding for 5/8” stock

Temperature: ±10° F

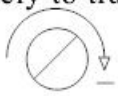
Setting	*Temperature*
0	0°
1	350°
2	360°
3	370°
4	380°
5	390°
6	400°
7	410°
8	420°
9	430°
10	440°

Machine Adjustments

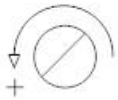
When the glue level sensing switch is open, the machine will send glue pellets from the glue hopper to the glue pot after a cycle. When the glue level sensing switch closes, the machine will not send glue from the hopper to the glue pot after a cycle.



If glue level sensing switch adjustment screw is turned clockwise the switch will close with less air pressure so glue pellets are less likely to transfer when glue pot level is low.



If the glue level sensing switch adjustment screw is turned counter clockwise, the switch requires more air pressure to close so glue pellets are more likely to transfer when glue pot level is low.



On your LOGO display the screen should be showing “Warming Up”

Press the DOWN arrow key and you should have a flashing Time/Date display. When you have that, press the RIGHT arrow key twice and you should have a display that looks something like this:

Q:
O 1 2 3 4 5 6 7 8 etc…
2

The first number on the O line, the 1 – is it ‘highlighted’? (as opposed to how the other numbers are displayed)

If YES, then check the output voltage on Q1,2 . It should be 120V.

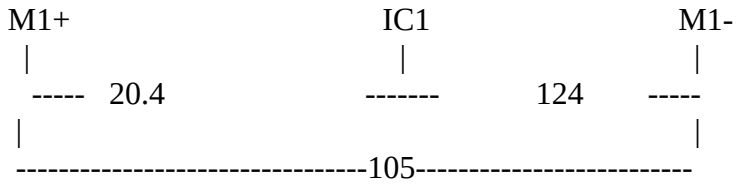
> If Q1,2 voltage is 120V, then it’s most likely your heating element.
> If Q1,2 is not showing 120V then check Q1,1. That should ALWAYS show 120V output
>
> If Q1,1 does show 120V then your PLC is bad and needs to be replaced
> If Q1,1 does NOT show 120V, then it’s a wiring issue, check to make sure the wires are connected and not loose or detached.

If NO, then check the Thermistor (see diagram that I will attempt to draw below)

> If the thermistor is OK, then we don’t know what the problem is exactly…
> If the thermistor is 15% off or more, then replace thermistor

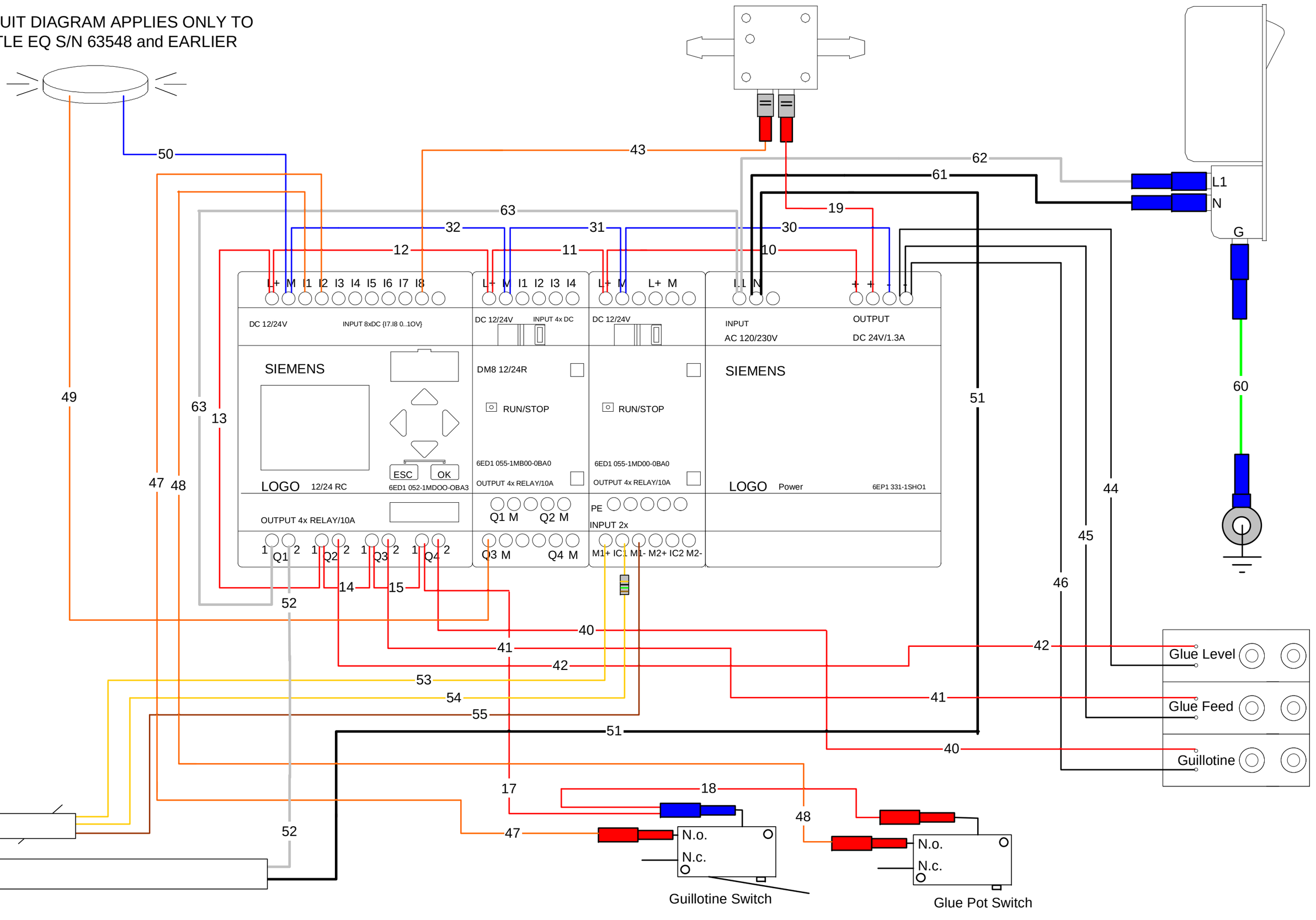
To check thermistor values:

Machine = Off

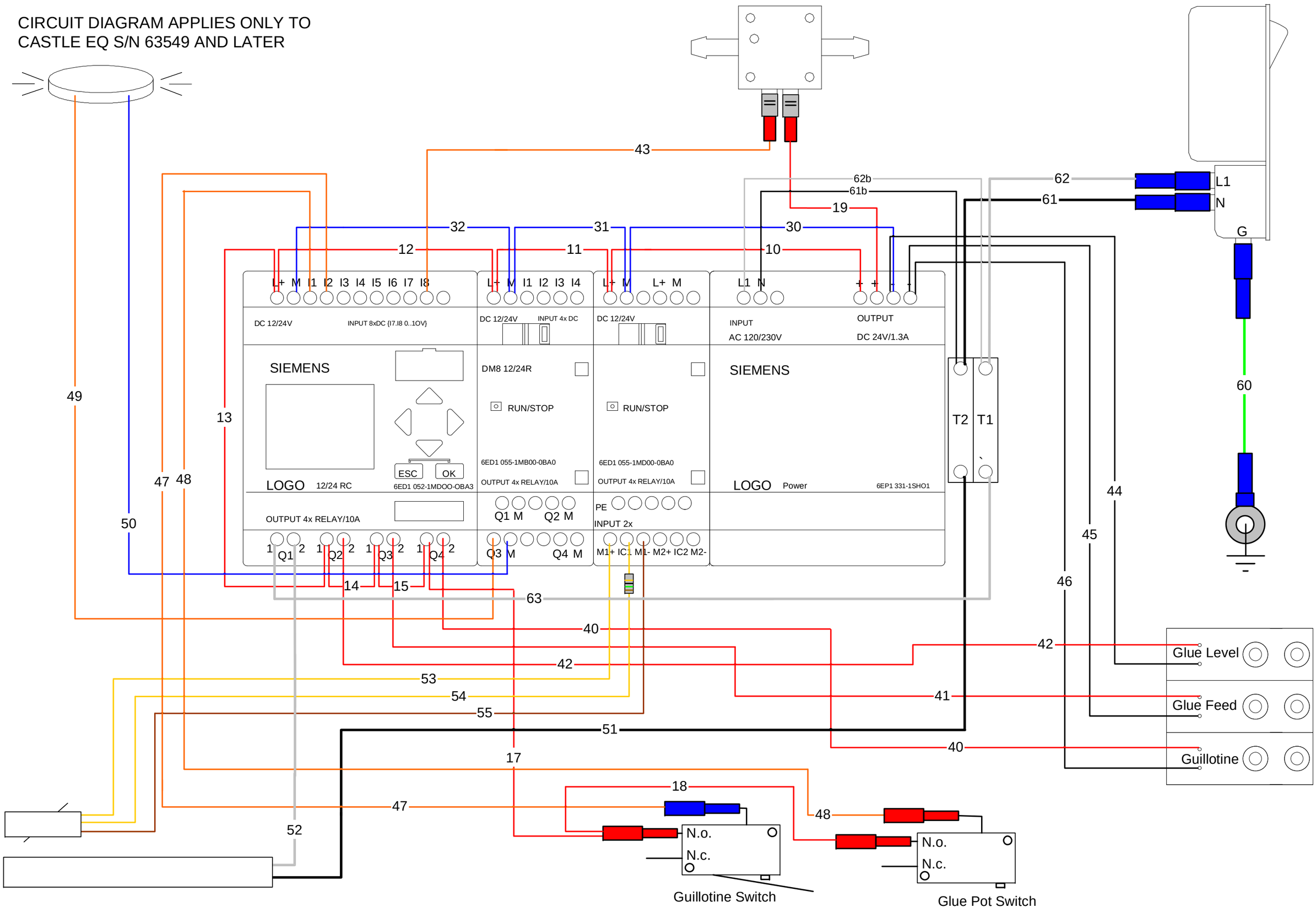


Enclosed is the EQ Wiring Diagram for your machine

CIRCUIT DIAGRAM APPLIES ONLY TO
CASTLE EQ S/N 63548 and EARLIER



CIRCUIT DIAGRAM APPLIES ONLY TO
CASTLE EQ S/N 63549 AND LATER



HOTMELT ADHESIVES

Canplast's line of premium, high performance, ethylene vinyl acetate (EVA) hotmelt adhesives are specially formulated for various types of edging materials and banding machines used by makers of kitchen and bathroom cabinets, residential and RTA furniture, office furniture, store fixtures and others.

Commonly used in automatic edgebanders for applying wood veneer or PVC edgebanding to engineered wood panel edges, Canplast premium hotmelts are available in a number of different formulations and colors.

Hotmelt 2001 (translucent)

- Premium EVA hotmelt with medium to high viscosity.
- Recommended for computer controlled panel processing centers, flow-through contour edgebanders as well as straight edgebanders.
- Ideal for thick and thin PVC, veneer, melamine, polyester and ABS edging.
- Excellent bond strength and heat resistance.
- Translucent color makes the lueline virtually disappear.
- Available in pellets.

Hotmelt 2020

- Low temperature, low viscosity hotmelt.
- Specially designed for manual contour edgebanders or where hotmelt is applied directly to the edgebanding.
- Ideal for thick and thin PVC, veneer, melamine, polyester and ABS edging.
- Available as Natural color pellets.

Hotmelt 2022

- All purpose, medium viscosity hotmelt ideal for all types of edging materials.
- Recommended for HolzHer edgebanders.
- Excellent resistance to hot and cold temperatures.
- Available in cartridges in Natural, Brown, White and Black colors.

Hotmelt 2024 (translucent)

New

- Premium, low viscosity, cartridges.
- Recommended for HolzHer edgebanders.
- High bond strength and heat resistance.
- Glue line virtually disappears.
- Available in cartridges.

Hotmelt 2031

- All purpose, medium viscosity hotmelt.
- Recommended for straight edgebanding and softforming.
- Ideal for all types of edging materials.
- Excellent resistanceto hot and cold temperatures.
- Available in pellets in Natural, Brown, White and Black colors.

Hotmelt 2041

- Premium hotmelt.
- Superior bond.
- A more forgiving hotmelt with greater viscosity consistency and better heat stability in the melt pot.
- Ideal for thick and thin PVC, solid wood, veneer, melamine, polyester and ABS edging applied with straight edgebanders.
- Available in pellets in Natural and White colors.

PRODUCT INFORMATION

CANPLAST PRODUCTS

THERMOPLASTIC PVC
thick and thin PVC edgebanding in solid colors, woodgrains and patterns.

VENEER
thick and thin veneer edging in strips and continuous coils.

MELAMINE
edgebanding for softforming, wrapping and stainable applications.

T-MOLDING
more than 50 profiles and 39 colors

HOTMELT
premium EVA hotmelt adhesives

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Sales offices throughout the United States, Canada and Mexico

CANPLAST

We've gone the distance to give you the edge

CANPLAST
EDGEBANDING AND SOFTFORMING HOTMELT ADHESIVES

New

CHARACTERISTICS	2001	2020	2022	2024	2031	2041
TYPE	EVA	EVA	EVA	EVA	EVA	EVA
VISCOSITY @200 C (392 F) using the Brookfield RVT Spindle SC4-29 in CPS (mPa.s)	95,000 cps	20,000 cps	60,000 cps	38,000 cps	60,000 cps	60,000 cps
COLOR	Translucent	Natural	Natural, Brown, White, Black	Translucent	Natural, Brown, White, Black	Natural, White
PACKAGING	Pellets (45 lb.bags)	Pellets (50 lb.bags)	Cartridges (45) (33 lb.boxes)	Cartridges (45) (24 lb.boxes)	Pellets (50 lb.bags)	Pellets (50 lb.bags)
DIRECTIONS FOR USE						
PROCESSING TEMPERATURE	190-210°C (374-410°F)	150-170°C (302-338°F)	180-200°C (356-392°F)	180-200°C (356-392°F)	180-200°C (356-392°F)	180-200°C (356-392°F)
ROLLER APPLICATION	18-60 m/min. (59-197 ft/min.)	18-40 m/min. (59-131 ft/min.)	18-60 m/min. (59-197 ft/min.)	12-40 m/min. (40-131 ft/min.)	20-60 m/min. (65-197 ft/min.)	20-50 m/min. (65-164 ft/min.)
NOZZLE APPLICATION	10-40 m/min. (33-131 ft/min.)				13-24 m/min. (43-79 ft/min.)	12-25 m/min. (40-82 ft/min.)
TYPE OF EDGING						
PVC (A)	1	1	1	1	1	1
SOLID WOOD (B)	2	2	1	1	1	1
VENEER	1	1	1	1	1	1
MELAMINE	1	1	1	1	1	1
POLYESTER	1	2	1	1	1	1
HPL (C)	--	2	2	2	2	2
ABS	1	1	1	1	1	1
TYPE OF EDGING MACHINES						
- Manual straight edgebanders	2	2	--	--	1	1
- Manual contour edgebanders	2	1	--	--	2	2
- Automatic edgebanders (12-25 m/min.)	2	1	1	1	1	1
- Automatic edgebanders (18-60 m/min.)	1	--	1	1	1	1
- Computer controlled panel processing centers	1	--	--	--	2	2
- Flow through contour edgebanders	1	--	--	--	2	2
- Softformers	2	--	--	--	1	--
CHARACTERISTICS	• Premium translucent hotmelt • Recommended for computer controlled panel processing centers, as well as straight edgebanders • Ideal for thick and thin PVC, veneer, melamine, polyester and ABS edging • Translucent color means no glueline and no color changes • Medium/High viscosity	• Low temperature hotmelt • Specially designed and recommended for manual contour edgebanders • Ideal for thick and thin PVC, veneer, melamine, polyester, and ABS edging • Good bonding properties • Good heat resistance • Long open time • Low viscosity • Required PVC minimum thickness is 0.024"	• All purpose hotmelt in cartridge format • Recommended for HolzHer edgebanders • Ideal for all types of edging. • Good resilience during cold and hot temperatures • Good heat resistance • Medium viscosity	• Premium translucent hotmelt in cartridge format • Recommended for HolzHer edgebanders • Ideal for all types of edging • Very good bonding properties and heat resistance • Low viscosity • Translucent color means no glue line and no color changes.	• General purpose hotmelt • Recommended for straight edgebanding and softforming. • Ideal for all types of edging. • Good resilience during cold and hot temperatures • Good heat resistance • Medium viscosity	• Premium general purpose hotmelt • Recommended for straight edgebanders • Ideal for thick and thin PVC, solid wood, veneer, melamine, polyester and ABS edging • Superior bonding properties • High heat resistance • More consistent viscosity • Better heat stability in the melt pot

A The back side of the PVC edges must be primed

B Solid wood edges with high resin content must be primed with a water-based adhesive diluted 50% with water.

C The back surface of HPL may vary. For best results, we recommend priming HPL with a solution of contact cement diluted with solvent. Contact cement should not contain any turpentine, oils and plasticizers.

1 Highly recommended
2 Recommended

TESTS WITH YOUR OWN MATERIALS ARE ABSOLUTELY NECESSARY

Cleaning Pre-clean while hot using a spatula. Cold residues can be removed using toluene or some chlorinated solvent.

Storage According to our experience, the adhesive is stable for at least 12 months when kept in a dry and cool place. Suggested storage conditions are normal ambient temperatures below 37.8°C or 100°F.

Safety Operators should be cautioned concerning the hazards of working with molten hotmelts. Serious burns can result from touching molten adhesives and parts of the equipment used to apply the holtmelts. Protect eyes and wear protective clothing. Hotmelt vapors can irritate the respiratory organs. Avoid inhaling.

First Aid If skin comes in contact with molten adhesive, quench the affected area immediately with water.