

Ribbon Overview

Ribbon is a thin film that is coated on one side with wax, resin, or wax resin, which is transferred to the media during the thermal transfer process. The media determines whether you need to use ribbon and how wide the ribbon must be.

When ribbon is used, it must be as wide as or wider than the media being used. If the ribbon is narrower than the media, areas of the printhead are unprotected and subject to premature wear.

When to Use Ribbon

Thermal transfer media requires ribbon for printing while direct thermal media does not. To determine if ribbon must be used with a particular media, perform a media scratch test.

To perform a media scratch test, complete these steps:

1. Scratch the print surface of the media rapidly with your fingernail.
2. Did a black mark appear on the media?

If a black mark...	Then the media is...
Does not appear on the media	Thermal transfer. A ribbon is required.
Appears on the media	Direct thermal. No ribbon is required.

Coated Side of Ribbon

Ribbon can be wound with the coated side on the inside or outside. The ribbon used must match the Thermal Transfer option installed. The standard Thermal Transfer option (black ribbon spindle) uses ribbon coated on the outside, and the alternate Thermal Transfer option (gray ribbon spindle, available on the ZM400 and RZ400 only) uses ribbon coated on the inside. If you are unsure which side of a particular roll of ribbon is coated, perform an adhesive test or a ribbon scratch test to determine which side is coated.

Adhesive Test

If you have labels available, perform the adhesive test to determine which side of a ribbon is coated. This method works well for ribbon that is already installed.

To perform an adhesive test, complete these steps:

1. Peel a label from its liner.
2. Press a corner of the sticky side of the label to the outer surface of the roll of ribbon.
3. Peel the label off of the ribbon.

4. Observe the results. Did flakes or particles of ink from the ribbon adhere to the label?

If ink from the ribbon...	Then...
Adhered to the label	The ribbon is coated on the outside and can be used with the standard Thermal Transfer option (black ribbon spindle). In the ribbon loading procedure, instructions are marked with this symbol. 
Did not adhere to the label	The ribbon is coated on the inside and can be used with the alternate Thermal Transfer option (gray ribbon spindle). In the ribbon loading procedure, instructions are marked with this symbol. 

Ribbon Scratch Test

Perform the ribbon scratch test when labels are unavailable.

To perform a ribbon scratch test, complete these steps:

1. Unroll a short length of ribbon.
2. Place the unrolled section of ribbon on a piece of paper with the outer surface of the ribbon in contact with the paper.
3. Scratch the inner surface of the unrolled ribbon with your fingernail.
4. Lift the ribbon from the paper.
5. Observe the results. Did the ribbon leave a mark on the paper?

If the ribbon...	Then...
Left a mark on the paper	The ribbon is coated on the outside and can be used with the standard Thermal Transfer option (black ribbon spindle).
Did not leave a mark on the paper	The ribbon is coated on the inside and can be used with the alternate Thermal Transfer option (gray ribbon spindle). In the ribbon loading procedure, instructions are marked with this symbol. 