

SECTION I

BI-VENT PLUS THIRD PRESS

DESCRIPTION

This Bi-Vent press is a three-nip press arrangement that supports the sheet through two press nips. There is a short open draw after the second press where the sheet is transferred to the third press felt. After the third press there is an open draw into the smoothing press and into the dryers (see figure 1). This press section is designed to operate at 1500 fpm. It utilizes a 22 inch suction pickup roll, a double-felted double-vented first press and Venta-Nip second and third presses. The only broke handling required is doctoring the sheet off the second press roll into a basement press pit. Felt change is designed to be safe and reduce downtime as much as possible.

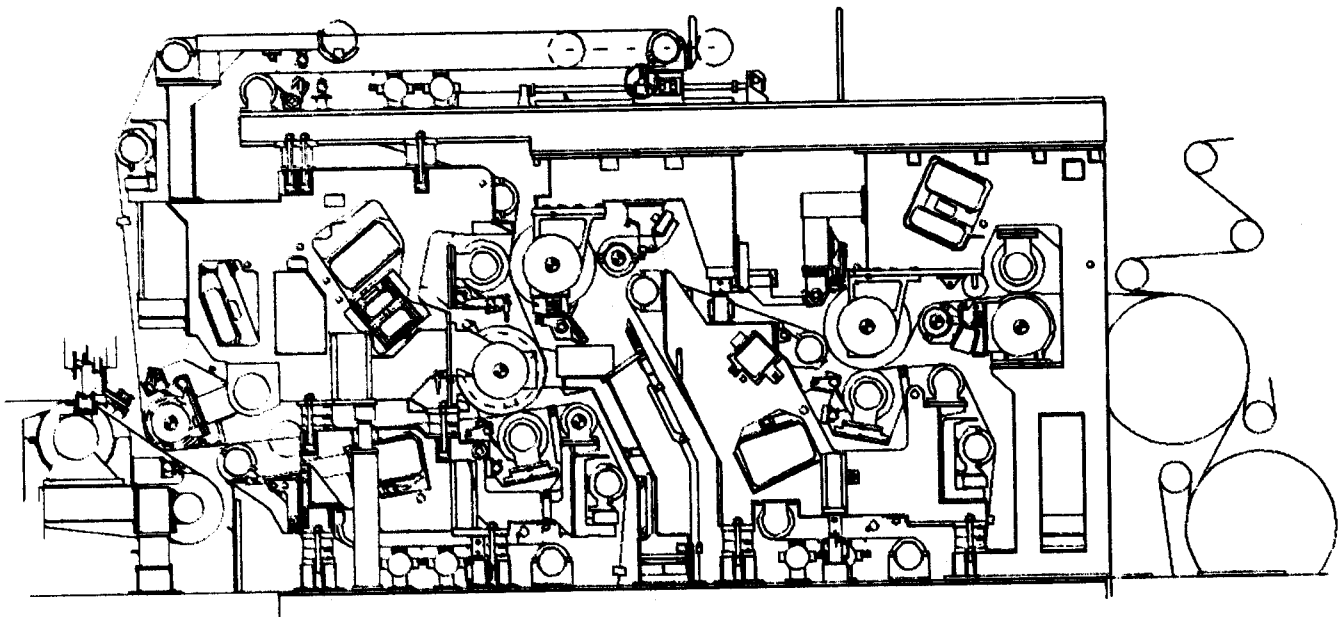


Figure 1. Bi-Vent Plus Third Press

The function of the Bi-Vent press is to achieve maximum water removal and achieve maximum runnability. Each of these functions is accomplished in the following ways:

Water Removal - the three loaded presses take the sheet from approximately 18% consistency and press it to over 40% bone dry. This pressing increases the tensile strength to allow the sheet to run through the dryer section with the minimum number of sheet breaks. The double-felted 1st press is designed for a maximum nip pressure of 400 pli. Double felting allows for increased water removal since water is handled on both the top and bottom side of the sheet.

The 2nd and 3rd presses are single felted and can be loaded to maximum nip pressures of 500 pli and 600 pli, respectively. The 2nd press is between a grooved Controlled Crown roll and a plain roll. The 3rd press is between a plain roll and a grooved roll. Since these nips are both single felted, high internal hydraulic forces are produced on the sheet. These hydraulic forces are responsible for the increased water removal in the 2nd and 3rd press nips.

Runnability - In the Bi-Vent press, the sheet is transferred by a suction pickup roll from the wire to a pickup felt where it remains until it is transferred to a plain roll after the 2nd press. The sheet remains on the roll and then has a short open draw into the 3rd press. There is another open draw into the 500 pli smoothing press and then into the dryer section.

The following operating instructions break the press operation down by section, highlighting the major concerns in each section.