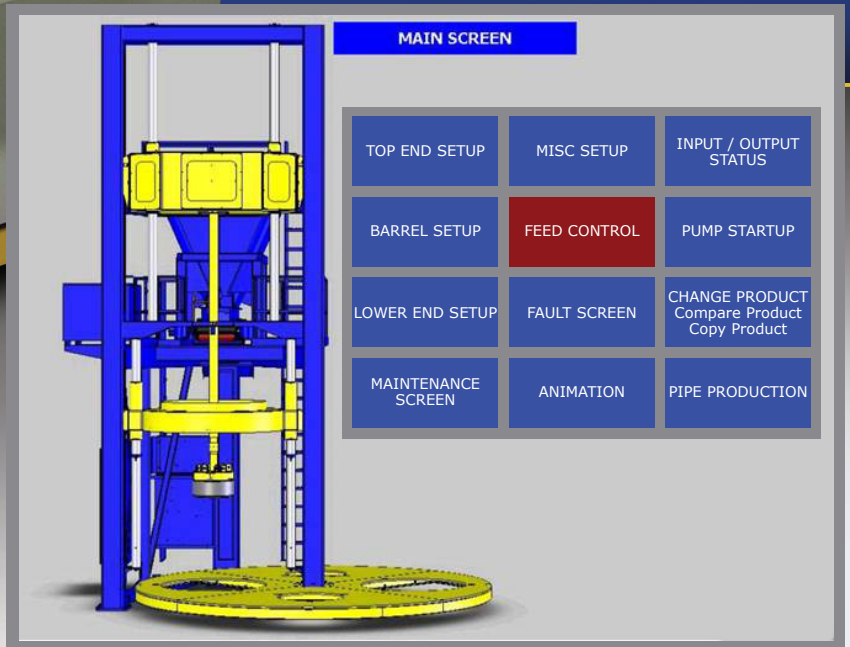


VISION 3 AUTOMATION

Concrete Pipe Equipment

The Vision 3 Automation system provides the utmost in precision and reliability for pipe manufacturing using Bidirectional and conventional packerhead pipe machines. The freestanding machine control console is located on the plant floor near the pipe machine. The console contains a color touchscreen Human-Machine Interface (HMI), programmable logic controller (PLC) for solid-state electronic control and a color flat panel touchscreen personal computer (PC) that controls high definition Ethernet cameras.



Preprogrammed logic maintains control of the basic machine cycle and numerous built-in features. These include maintenance schedules, searchable parts catalogs, troubleshooting and an extended memory capacity for storage and recall of setup information for up to 200 different pipe sizes and configurations. Machine control setup is simple; the supervisor selects the desired pipe size and presses a button to complete. This eliminates the majority of the initial fine-tuning usually required for daily start-up. Machine adjustments are made using a color touchscreen interface. The supervisor uses the touchscreen to monitor machine operation and adjust machine functions. Diagnostic help and instruction screens explain machine functions and aid operations. Testing screens provide enhanced troubleshooting ability. A memory card in the touchscreen unit maintains screen memory and pipe settings, battery backup is not needed.

STANDARD FEATURES

Video System

The Vision 3 console houses a 17" (432 mm) color flat panel touch screen PC. The PC runs a Windows® operating system from which the supervisor can watch pipe manufacturing from the plant floor through four high definition Ethernet cameras. The cameras are controlled from the flat panel PC and camera software. One camera is mounted above the rollerhead, another is set to view the material in the holding hopper and a third is used for observing the bottom of the pipe bore from the machine pit. The optional fourth camera is located above the offbearing station to view the spigot and bore of the pipe before it is removed from the machine. The supervisor can select the desired camera angle or zoom from the console and can view all the cameras at once with a quadrant type view or view a single camera full screen.

Feed Control

The PLC manages the automated feed control using a highly responsive hydraulic conveyor drive. Actual packershaft drive horsepower is monitored and controlled by digital logic. The logic is self-tuning to compensate for the many varying conditions that occur during pipe manufacturing, resulting in more consistent production.

Field Conversions

Vision 3 conversions can be applied to existing BiDi®, counter-rotating, or conventional packerhead pipe machines. In most cases, the Vision 3 system will interface with many of the machine's existing mechanical and hydraulic components. These conversions provide the same features as on a new machine and are custom engineered to minimize down time for field installation.

ADDITIONAL FEATURES

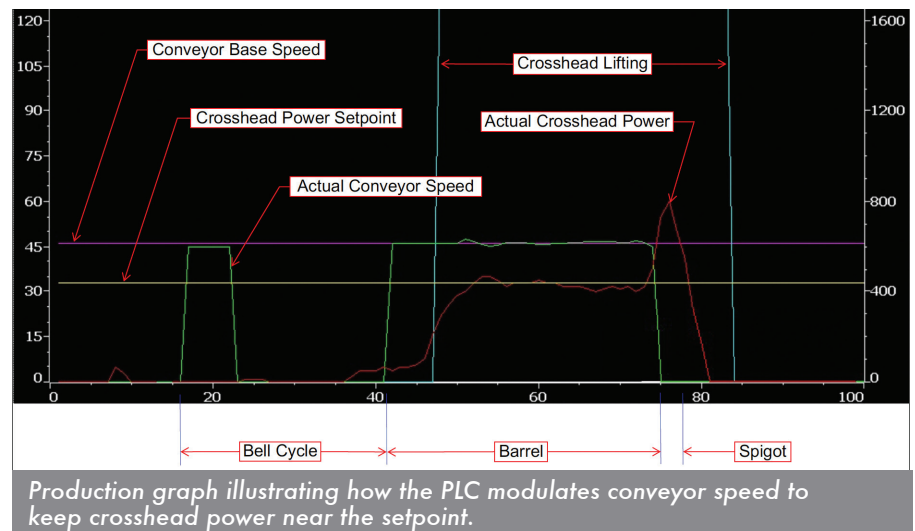
A laser distance crosshead sensor speeds up production by eliminating the need to return the crosshead to the home position. A "Continue/Remake" button located on the console allows the supervisor to restart the Auto Cycle when necessary. If the supervisor sees a minor flaw in a pipe just produced, a touch of the same button automatically runs a second pass once the pipe is under the machine. The console also contains a full complement of controls for manual operation.

Wiring is minimized and simplified using a communication network from the Vision 3 console to the pipe machine. Where possible, wire and cable on the pipe machine are run through conduit. "Emergency Stop" pushbuttons are located at various positions on the pipe machine.

The Self-Cleaner Pre-Start option begins the self-cleaner before the end of the bell cycle (as determined by the end of the longest timer – turner or vibrator) so that more of the left-over toptable material can be used in the bell before the auto-lift starts.

The Crosshead Lift Jog option runs during the bell cycle. After the bell mud feed is completed the crosshead oscillates up and down a few inches for a user specified time. This can provide additional compaction in the bell and transition area of the pipe.

An Ethernet modem, added to the controls, provides remote access via the Internet for troubleshooting by a technical service representative. The representative can log onto the controls and see the system's activity which greatly enhances the ability to troubleshoot the equipment. The Internet can also be accessed through the modem using the video monitor/PC.



801 Johnson Street
Alpena, Michigan 49707 USA
+1.989.354.4111 sales@besser.com
besser.com

For better viewing, all guards, safety devices and signs are not necessarily shown. Some of the equipment shown or described throughout this brochure is available at extra cost. Besser Company reserves the right to change or improve product design and specifications without prior notice. Since the time of printing, some of the information in this brochure may have been updated, ask your Besser sales representative for details.