



# APEX™ SERIES CONCRETE PIPE MACHINE

The Next Generation of the BiDi® Family of Machines

The APEX features:

- Easier Installation
- Reduced Cycle Times
- Smoother Operation
- Reduced Maintenance

APEX machines combine advanced pipe-making technology with the time-tested Bidirectional Rollerhead System to produce pipe with excellent wire-to-concrete bond, improved compaction, and superior appearance. High production APEX machines manufacture pipe in uniform lengths with precise joint detail and quality inside and outside finish. Reinforcing cage twist problems are eliminated, leading to higher product strengths.



## FOUR APEX MODELS AVAILABLE:

The APEX is the perfect machine for a new plant or to replace an existing machine.

| APEX MODEL | DIAMETER                 | MAXIMUM LENGTH          |
|------------|--------------------------|-------------------------|
| A-36       | 8'-36" (200mm - 900mm)   | 8' (2.5m) or 10' (3m)   |
| A-48       | 8"-48" (200mm - 1200mm)  | 8' (2.5m) or 12' (3.5m) |
| A-60       | 12"-60" (300mm - 1500mm) | 8' (2.5m) or 12' (3.5m) |
| A-84       | 18"-84" (450mm - 2100mm) | 8' (2.5m) or 12' (3.5m) |

## FEATURES AT A GLANCE:

### INSTALLATION

**Pit Shell:** The pit features a simplified design. The back corner is squared-off which makes the pit easy to excavate and pour. Access to the pit can be via stairs or ladders in different configurations.

**Frame:** Narrow front post centers reduce the footprint of the APEX by approximately 15% compared to previous BiDi models which allows it to fit into a smaller space.

**Packershaft:** The splined inner Packershaft mates directly to a drive flange on the top gearbox, eliminating the stub shaft, which simplifies installation, and provides smooth operation.

### ENHANCED OPERATION

**Cycle Speed:** Improvements in machine design can result in up to a 10% increase in pipe production per hour.

- The smaller turntable diameter rotates faster reducing cycle time by 2-3 seconds.
- The top table moves up and down independently of the crosshead. This allows the crosshead top stop to be slightly lower and allows instant rapid drop from top stop, reducing cycle time by up to 4 seconds.
- A super rapid drop of the hydraulically operated 8' crosshead reduces cycle time compared to previous BiDi models.

**Crosshead:** Chrome guide tubes are 6" diameter. Besser utilizes PTFE bearings that have larger spread for better stability and reduced wear. The proven BiDi drivetrain is retained from the A-Series machines.

**Crosshead Power Unit:** The time-tested power unit design provides efficient, quiet operation, and easy servicing of critical components.

**Top Table:** The top table utilizes guide rollers instead of guide tubes, which provide more space for the mold.

**Bell Packer:** Electro-hydraulic position control replaces mechanical stop rods for limiting Bellpacker lift height (Edge Automation only). Bell vibration with vertical impact hydraulic or rotary electric vibrator is available. A catch pan and a pit cleanout system are incorporated into the design.

**Hydraulics:** The 8' crosshead super rapid drop reduces cycle time. All functions are handled with one pump equipped with state-of-the-art filtering and cooling. Dropping system pressure during extended idle periods (Edge Automation only), reduces power consumption and pump wear.

**Turntable:** The table has a 2-piece/4-hole design that accepts drop-in bottom centering plates. Both the table diameter and mold rotation radius, are reduced. Electric drive motor horsepower is increased and VFD is upgraded for precise control.

**Material Hopper:** The hopper duplicates a proven BiDi design. It has front and rear gates, air vibrators, rounded corners, and laser sensors for hopper level and feed loss (Edge Automation only).

**Air and Water:** The water system has solderless fittings plumbed with copper tubing for leak-free operation.

### ELECTRIC CONTROLS

Edge Automation operates on an Allen-Bradley platform.

The operator's station has a small footprint and adjustable HMI and monitor. The operator's HMI screen can be made available for remote viewing. Enhanced production reporting is available for remote viewing.

### SAFETY

The guarding package includes protective cages for all ladders that exceed OSHA requirements.

For better viewing, all guards, safety devices and signs are not necessarily shown. Some of the equipment shown or described throughout the 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.