

# MP12 – MP14 – MP22 – MP24 Flying Paster/Splicer



*High Performance at High Speeds for Newspaper Printing*



**T**he MEGTEC® MP12, MP14, MP22 and MP24 pasters are the heart of a new highly modular generation of high performance core-driven flying pasters, designed for multi-web single and double-width high production printing presses. The compact design and lowest possible height is ideal for limited space requirements, especially in newspaper printing.

*The first digit in the MP name designates the application:  
1 for single width and 2 for double width*

*The second digit symbolizes the acceleration and web tension control:  
2 represents 2-Quadrant drive with pneumatic brakes  
4 represents 4-Quadrant drive with web tension control by motor*

*The bottom line is process knowledge*

# MP12 – MP14 – MP22 – MP24

## Flying Paster/Splicer



Core acceleration is standard on all MP models. This allows easy straight-across splice preparation



Many parts are identical or modular on all MP models with highest functionality at a low investment cost for the customer



Unique mechanical transmission with spline shafts for high design modularity between 2-Quadrant and 4-Quadrant drive systems

### Performance Benefits

- High operation speed
- Precise web tension with low minimum value
- Compact size ideal for limited space requirements
- Split arm design for loading of two rolls of different widths at the same time
- Core chucks for simple loading
- Automatic roll loading option
- Virtual elimination of paster-caused web breaks
- Core acceleration of the new roll
- Rapid and stable web tension control (core braking)
- Tail rewinding and slack removal
- 4-Quadrant drive option
- Simplest splice preparation – straight continuous tape
- Versions for coldset and semi commercial
- Heatset and coldset infeed options
- Highly automated - simple operation
- Reliable and low maintenance

### Resource Saving, Intelligent Design

New development of high performance electronics on one side and increasing raw material price on the other side require different thinking, when developing a machine to become the new reference product for the newspaper industry.

The unique frame design combines highest strength with a significantly reduced weight which results in using less steel. On the other side, the latest drive and control technology ensures highest performance.

Well thought-out details prove that the design and manufacturing of pasters is MEGTEC's core expertise.

The MP series has been designed, developed, engineered and prototype tested using the full portfolio of DFSS (Design for Six Sigma) tools. Printers have been interviewed and the required quality functions have been carefully implemented. MEGTEC's experience and the requirements from end-users and press manufacturers formed the basis for a precise specification of the MP pasters series.

### Configurations

Different configurations are possible. In multi-web newspaper printing, the pasters usually are installed in the basement below the printing units. The compact design, without bull shaft, reduces the length of the system and is well suited for 4-high tower installations with a small distance between the towers.

### Split Arm Design

Ergonomic correctness and user friendliness have been two of the most important considerations in the design of the MP pasters. The roll width is adjusted to the printing width of the press and three different maximum sizes up to 68" (1720 mm) are available. Two motorized roll holder arms are placed on each side of a turret frame. These can be moved sideways by linear controls independently of the other roll position. This permits the loading of two rolls of different widths at the same time into the machine.

In turn, this facilitates very simple and rapid splicing to other roll widths without first having to take out both rolls and then re-adjusting the position of the roll arm.

### Easy Roll Loading

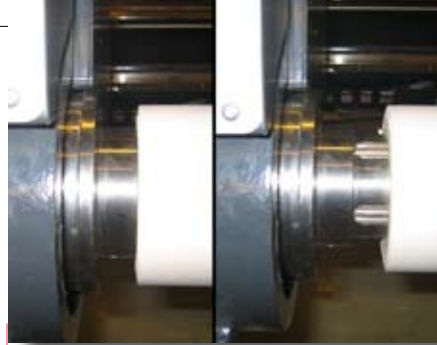
Rolls can be loaded directly from the floor level into the arms. Fully automatic chucks improve operating efficiency and safety. Loading is controlled automatically or by a push button for chuck engagement with automatic tightening at the end of insertion. The chucks are positively locked into the core and do not have to be re-tightened during running - even after an emergency stop. As an added safety feature, the lock will not release even if electricity and compressed air supply is interrupted.

A special detection device ensures the chucks are inserted in the core at any given time.

The low minimum roll diameter for splicing of 18" (450 mm) allows



*Motorized split arms are standard on all MP 12 – MP 24 models*



*A special detection device ensures the chucks are inserted in the core at any given time*



*Compact, modern design and very low machine height to fit in all existing press basements*

significant flexibility for running partial rolls without special handling. Normal and symmetric configurations are available for dual web center loading. On many MP models the ARL (Auto Roll Loading) option allows interface to the paster with an automatic roll loading system and to load new rolls and unload cores or butt rolls - 100% without operator assistance. The optional MEGTEC ROLLOAD® roll handling system provides all roll handling functions from roll preparation at a central unwrapping station to the paster and is available in different levels of automation. The benefits of operation include reduced paper waste, higher efficiency and enhanced safety.

### **Core Acceleration for Highest Splice Efficiency**

All MP models feature core acceleration. The new roll is accelerated by an AC motor over the center of the roll. This process improves control and eliminates contact with the paper surface and potential damage. The straight continuous splice preparation is simple and avoids the creation of air-pockets and gives better handling of damaged and out-of-round rolls. A constant short adjustable tail length minimizes potential folder jams. Optionally, the new roll is lined up automatically on operator side.

### **MP 12 and MP 22: 2-Quadrant Core Acceleration and Braking**

Two standard acceleration motors are located outside of the turret in the machine frame and drive the rolls through

a patented mechanical transmission. New rolls are accelerated to reach the required speed for pasting. At the same time the unwinding butt roll is driven in order to keep web tension very low even at high production speed. This technology also allows to rewind butt rolls after the splice and to remove slack during blanket wash. The newly developed low inertia pneumatic brakes on each arm ensure optimum operation and require low maintenance.

### **MP 14 and MP 24: 4-Quadrant Core Acceleration and Braking**

Core braking by 4-Quadrant motors replaces conventional pneumatic disc brakes.

AC motors with vectorial flow control are a highly responsive drive and braking system for tension control. This provides a constant web tension irrespective of variations of press speed.

Stable web tension is assured from the pneumatic dancer roller assembly with feedback control. Tension is managed by the PLC which controls the 4-Quadrant motors to constantly maintain the dancer in balance.

Additional benefits are reduced maintenance and noise level. Separate pneumatic brakes prevent roll rotation during splice preparation and if required, supply additional torque during an emergency stop.

### **PLC control and Operator Interface**

All machine sequences are controlled by a PLC integrated into the drive system. Signal lamps and push buttons are logically grouped and the visual display provides the operator with machine status information. The operator panel features a touch screen control for paster setting with a display screen for status, fault finding, service diagnosis and help screens. Key functional hard buttons are available on the machine side frame. Like all MEGTEC Webline products, the paster can be integrated with the press control system. The integration of the paster into the web-up system is available for most press types.

### **Infeed Versions**

Tension control begins at the paster. MEGTEC's splicers with integrated infeed can be controlled for optimum performance. This allows the paster to operate at a low tension to limit tension variations to be processed by the infeed. The integrated infeed's extremely stable tension is made possible by the use of high dynamic mechanical as well as electronic elements and provides fast and accurate tension control even at very low values. Special packages for Coldset and Heatset applications are available.

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Standard Model Features	MP 12 1000	MP 12 1700	MP 14 1700	MP 22 1700	MP 24 1700
Maximum running & splicing speed	2850 fpm (14.5 m/s)	2850 fpm (14.5 m/s)			
Maximum roll weight	2200 lbs (1000 kg)	3750 lbs (1700 kg)			
Maximum roll diameter	50 inches (1270 mm)	50 inches (1270 mm)			
Minimum splice diameter	18 inches (450 mm)	18 inches (450 mm)			
Maximum web width	40 inches (1020 mm)	40 inches (1020 mm)	50.5 or 67.5 inches (1280 or 1720 mm)		
2 arm flying paster with motorized split roll arms on a turret frame	✓	✓	✓	✓	✓
4 pneumatic core chucks for Ø 3" (76 mm)	✓	✓	✓	✓	✓
Core acceleration of the new roll	✓	✓	✓	✓	✓
Torque adding on unwinding roll prior to splice, tail rewinding and slack removal	✓	✓	✓	✓	✓
2-Quadrant drive with pneumatic brakes on each arm for web tension control from roll core	✓	✓		✓	
4-Quadrant drive with AC motors for web tension control from roll core			✓		✓
Pneumatic brakes for E-stop	✓	✓	✓	✓	✓
Sidelay adjustment <math>\pm 7/8''</math> (20 mm)	✓	✓	✓	✓	✓
Splice arm with pneumatic activated knife and rubber roller, simultaneous cut & splice under tension	✓	✓	✓	✓	✓
Roll loading directly from floor into split-arms, Loading and unloading on same side	✓	✓	✓	✓	✓
Drillings for OEM web-up system	✓	✓	✓	✓	✓
Control and regulation by PLC, remote control of sidelay and web tension	✓	✓	✓	✓	✓
Independent frames, fully assembled, pre-wired, pre-piped and tested for easy installation	✓	✓	✓	✓	✓
<b>Versions/Options</b>					
Normal and symmetric configurations for center loading	○	○	○	○	○
Load bearing frames	-	-	○	-	○
Heatset infeed package	-	○	○	-	-
Coldset infeed package	-	○	○	○	○
Automatic edge alignment	○	○	○	○	○
Automatic sidelay control	-	○	○	○	○
MEGTEC motorized web-up device	○	○	○	○	○
ARL automatic roll loading interface	-	-	○	-	○
Communication with press	○	○	○	○	○