

ESP – ELECTRONIC SLITTER POSITIONING

MAXCESS®

MAGPOWR



TIDLAND

MILL FINISHING & LARGE-SCALE CONVERTING OPERATIONS

The Tidland ESP is perhaps the most advanced slitting system on the market. Capable of repositioning 10 knives in under a minute, and accurate within ± 0.05 mm (0.002 inches), the ESP is sure to increase productivity and drastically reduce downtime. Designed for demanding environments, the ESP's durable steel construction and enclosed channels provide reliable, trouble-free slitting in mill finishing & other large-scale converting operations. Typical materials include coated/uncoated boards, tissue, newsprint and fine papers. The ESP's modular design allows for easy retrofit to most mill winders, and can be mounted at any angle for vertical or horizontal web paths. The use of absolute encoders provides simultaneous and bi-directional repositioning of the knifeholders and anvil blades—even with the web in place.



GENERAL SPECIFICATIONS

Standard Knifeholders

Performance Series Class III

Minimum Slit Width

152.4 mm (6 inches)

Maximum Designated Speed*

3,048 mpm (10,000 fpm)

Pneumatic Instrument grade air, nominal

80–100 psi

Electrical

3-phase standard

460 VAC standard

*Dependent on material and application

KEY FEATURES

- Computer operated for fully automatic, high-speed knife positioning
- Slitter blade repositioning accuracy within ± 0.050 mm (0.002 inches)
- Stores unlimited slit sets & patterns
- Can retrofit to almost any winder
- Adapts to center wind, center surface, or bi-winding machines
- System installation usually requires no more than 48 hours, averaging under 5% of the total equipment cost

SYSTEM FEATURES

STANDARD SYSTEM FEATURES	AUTOMATIC	MANUAL
ESP Channels Knife and Anvil Channels are heavy duty steel construction, the pressurized channels are completely enclosed.	X	X
Carriages The carriages are interchangeable and can be easily removed from the front of the system from any position in the channel.	X	X
Encoder Package The electronics package mounted on each carriage contains an absolute encoder that is addressable and interchangeable. RS-422 interface to PC.	X	
Performance Series Knifeholder Class III with Swing Cartridge for shear slitting. D2 steel blade with 200 mm (7.9 inches) diameter.	X	X
Link Pin Manual linking mechanism used for manual positioning and calibration.	X	X
Anvil Motor Assembly Ziehl-Abegg 3-phase External-Rotor-AC dust sealed motor, 0.65KW. D2 Steel Anvil Rings.	X	X
Servo Motors Allen-Bradley AC brushless servo motors with lifetime lubricated bearings.	X	
Cabinets Rittal cabinets feature nine fold frame steel construction, are free-standing and meet NEMA 12 standards.		
Servo Drive Cabinet Houses Allen-Bradley Ultra 3000i Servo Drives with RS-422 Interface to PC.	X	
AC Drive Cabinet Houses the Allen-Bradley AC Drive and Motor Starters.	X	X
Computer Console Microsoft (Windows 2000/XP) ESP Control Software Dell PC and Industrial Grade Monitor	X	
Cables Shielded twisted pair control cables up to 100' Allen Bradley shielded servo cables up to 80' AC Motor power cables up to 80'		X X X

OPTIONS

Products

Special considerations such as: Touch Screen Monitor, other AC Drives, other PC brands available upon request.

Class II configuration capable of 114.3 mm (4.5 inch) minimum slit width.

Services

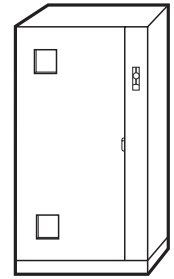
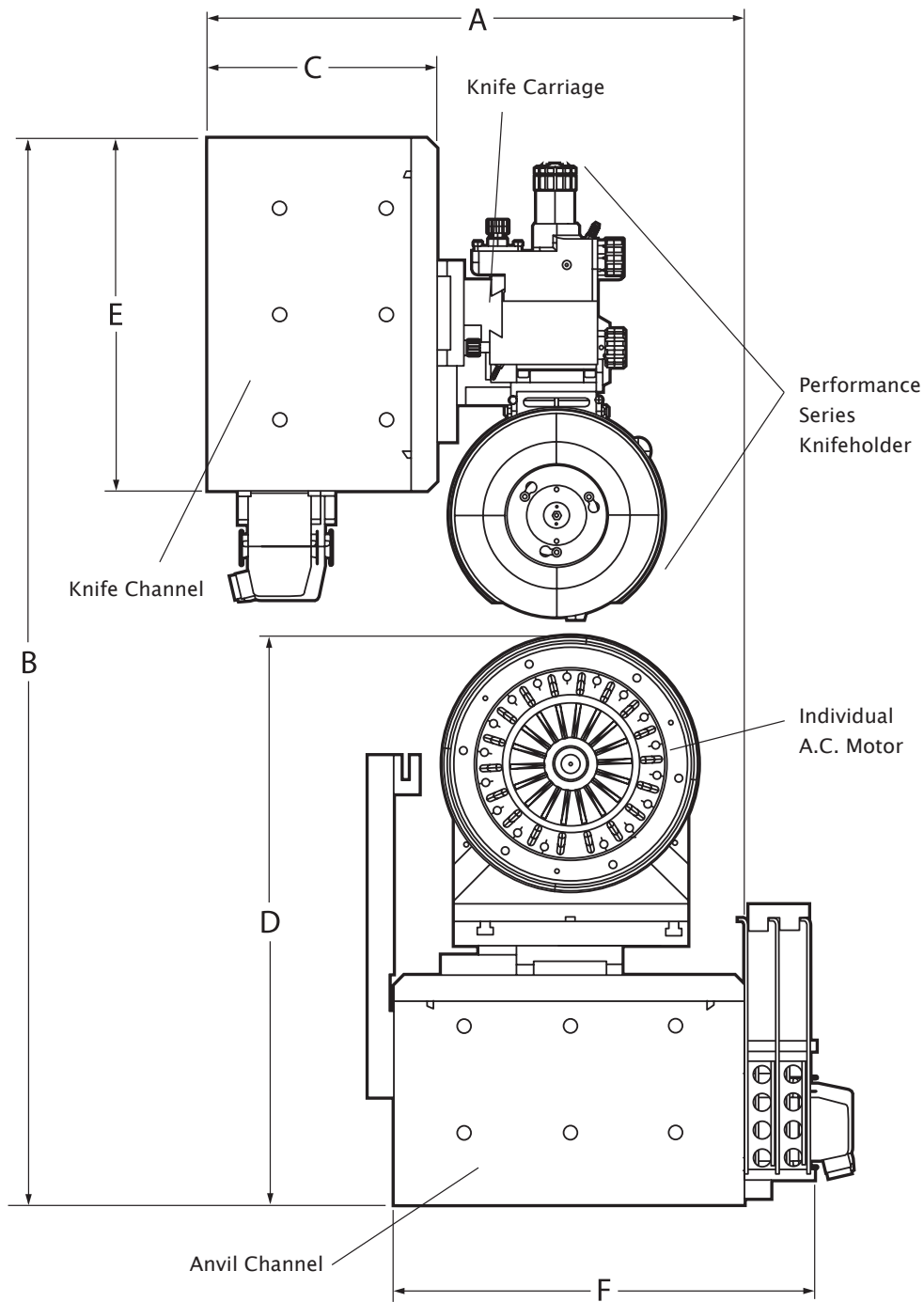
Integration into existing Mill computer.

Interface with Mill Systems, i.e. interface to PLC for core chuck position, roll handling systems, order management and trim optimization systems.

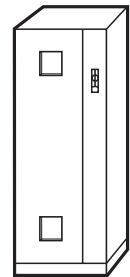
Material Slit Testing.

DIMENSIONS AND NOMENCLATURE

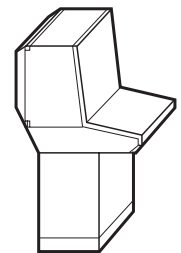
This diagram represents a typical ESP system for a horizontal web path for a shear slitting application.



Servo Drive Cabinet



AC Drive Cabinet



Computer Cabinet

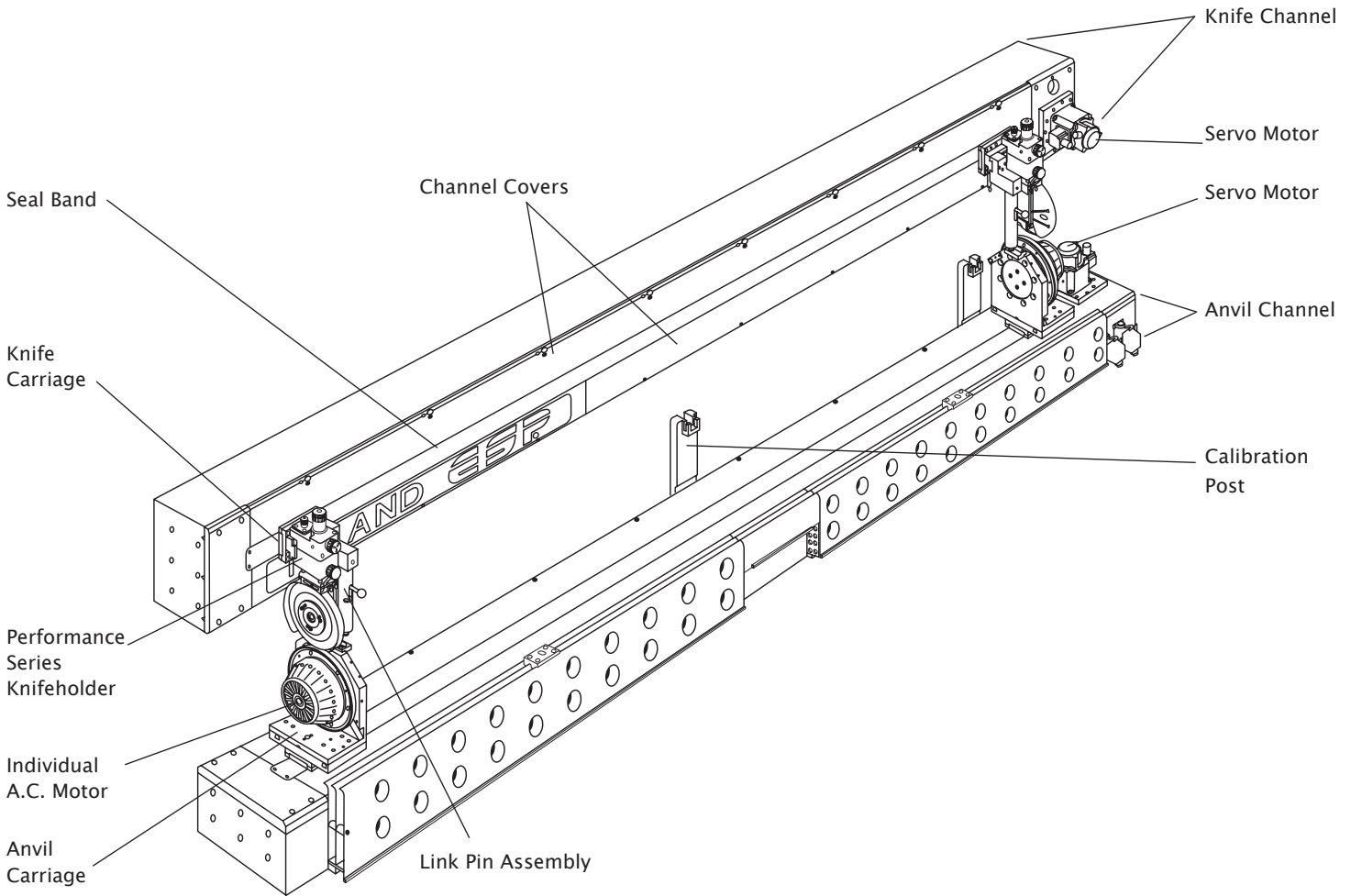
DIMENSIONS	DUAL (> 12 SLITS)		SINGLE (< 12 SLITS)	
	MM	INCHES	MM	INCHES
A	516	20.312	478	18.838
B	1025	40.370	988	38.890
C	218	8.588	181	7.114
D	547	21.523	510	20.068
E	338	13.312	338	13.312
F	406	16.000	406	16.000

NOTE:

Dual Depth (most common): 11–24 Slits

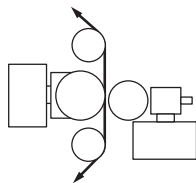
Single Depth: 1–10 Slits

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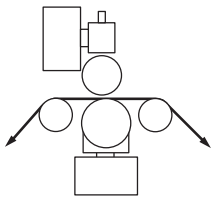


SLITTER CONFIGURATIONS

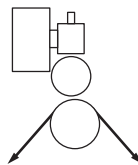
Tangential Shear Slitting
Vertical Web Path



Tangential Shear Slitting
Horizontal Web Path



Wrap Shear Slitting
Crush Slitting Any Position



The Tidland ESP can be mounted at any angle for vertical or horizontal web paths and is easy to adapt to center wind, center surface or bi-wind machines.

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FIFE

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