



SHRINKWRAPPING AND PACKAGING EQUIPMENT

SHRINK PACKAGING EQUIPMENT

SERVO CAM SEAL BAR VS. CONVENTIONAL SEAL BARS

By Michele Pedro, Technical Writer, Polypack, Inc.

Choosing the right technology in shrink wrappers/bundlers packaging equipment can be challenging. Recent technological improvements in shrink wrappers/ bundlers were made using servo technology. The newest innovation is the servo cam seal bar used to replace the conventional seal bars. Servo cam seal bar technology offers several advantages over conventional designs; more reliable, more accurate, smoother operation with higher speed, and reduced seal pressure.

Conventional seal bars move towards each other driven by air cylinders or motors. This type of movement is fine when operating at speeds slower than 65 packs per minute. Above 65 packs per minute the air cylinder seal bars become erratic and control is inconsistent. The shock absorbers and cylinders must be maintained regularly or they can slam together causing other components to fail. Conventional motor driven systems often utilizing a servo must accel quickly down, decel hard before making contact with the lower pad, stop and hold pressure, then reverse up and stop quickly at the top. All of this stopping and starting is hard on components and it is sometimes difficult to achieve the seal dwell required by varying films and production rates.

Servo Cam Advantages:

Single servo motor control allows accurate and flexible positioning that improves consistency of the sealing system so products can be run closer together, reducing the gap between them and the amount of film used on each product. With gap reduction the linear speed at which the product moves through the machine can be reduced allowing longer dwell over the same sealing area.

Smooth operation is one of the main advantages. During continuous product runs the seal bar and carriage never come to a stop. The carriage and seal bar are powered by a single servo motor that never changes rotational direction, which provides a longer life for the drive train (timing belts, couplings, pulleys) by eliminating the impact of changing directions and vibration normally associated with conventional designs. The servo runs through a rotating cam profile that varies the speed depending on the number of products run per minute. The single servo design insures that the carriage and seal bars are always in time with each other and that the seal dwell is maximized regardless of the processing speed.

Reduced Seal Pressure eliminates unnecessary wear on the sealing system components by reducing the amount of pressure that is required to seal by 90%. The significant pressure reduction is due to the even pressure that is applied by the system and the efficient cam profile that maximizes seal time.

Nwv0107



POLYPACK, Inc. HEADQUARTERS: 3301 Gateway Centre Boulevard – Pinellas Park, Florida 33782
Tel: (727) 578-5000 – FAX (727) 578-1300 – email: info@polypack.com