

UNWINDING & WINDING



ADVANCED TECHNOLOGY SURFASTART WINDER

OVERVIEW

Davis-Standard's new Advanced Technology SurfaStart (ATS) Winder is engineered to allow your process maximum efficiency and profitability. With the ability to in-line slit and wind consistent, high quality rolls up to 1500 mm in diameter, on cores as small as 77 mm I.D., processes will see reduced production costs and reduced scrap. The design limits shaft deflection and critical speed problems before an automatic transfer to new cores, virtually eliminating wrinkles and core start problems. Slit rolls are surface wound using programmed tension, nip and torque and supported on the winding drum and driven support drum throughout the entire winding cycle providing your process with superior quality in-line slit products. Wind-up with the best, wind-up with Davis-Standard, the world leader in winding technology.

TECHNICAL SPECIFICATIONS

Diameter Range	450mm/18" minimum to 1.5m/60" maximum
Web Widths	Up to 5.5m/220"
Slitting and Winding Speeds	750 fpm on 100 mm O.D cores 2500 fpm on 4" O.D. cores 1200 fpm on 175 O.D. cores 4000 fpm on 7" O.D. cores

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FEATURES INCLUDE

- Winding slit rolls on wide machines in a continuous operation, shaft critical speed and deflection are major problems. The shaft and roll support systems on the ATS eliminate these problems.
- The driven primary arm nip roll “sandwiches” the new cored shaft between the main drum and nip roll at roll change virtually eliminating the natural deflection which causes critical speed problems.
- The transfer shoe system with pop-up knife assures a straight, clean transfer regardless of web speed.
- The driven primary arm nip roll assures a good hard start and proper hardness profiling through the programmed nip and programmed torque control as a function of the winding roll’s diameter through a position sensor on the driven primary nip roll’s pivot.
- The 11 o’clock change position and the 1 o’clock winding position on the main winding drum provide excellent core and winding roll support. Slow and controlled movement assures winding straight sided rolls.
- The driven support drum supports the winding roll set in the winding position to also help minimize the winding rolls deflection. The support drum remains level at all times by a torque tub and rack and pinion arrangement.
- The driven support winding drum assures winding rolls with proper density profile through the programming of the nip pressure and the torque control of the drive. The driven support drum is also used to stop the wound set after transfer.
- Shaft sensing devices are incorporated into the support arm to prevent excessive loading by the support drum causing the lifting of the winding roll set.
- The support arm is used for safety to ensure the winding roll set is contained inside the two winding drums. It is also used to prevent lateral movement of the winding roll set and to eject the finished roll set.
- A position sensing device is incorporated into the support arm to counter balance the arm assembly to prevent excessive loading of the coreshaft by the support arm causing shaft deflection.
- The ATS incorporates automatic shaft handling into its design to assure continuous high productivity.

