

SLITTER REWINDER NTS - Effective rewinding of materials along with longitudinal cutting

Slitter Rewinder is a device widely used in the printing industry, plastics processing and paper industry. It is characterized by precision and efficiency. There are two types strictly connected with level of equipment. In both cases most desirable are machines build with excellent quality, with easy to use panel, safe and largely automated. Slitter Rewinder is equipped with web guiding systems - material edge control system, automatic tension control, foil edge removal systems (winder or pneumatic waste collection), deionisers providing electrical discharge, pneumatic clamps for winders and many other support systems.

In slitter rewriter for film and paper, the material can be clamped using quick-clamping holders and expansion shafts or pneumatic pins, mechanical pivots activated by lateral force. Our slitter rewriter can be equipped with dedicated hydraulic system for retrieval and collection of bales of material from the machine. Slitter rewriter is provided with laser knife and gliz positioner. Machine is also equipped with a scissor or razor cutting system.



VERSIONS:



STANDARD – NTS STD



ADVANCED – NTS ADV

SPECIFICATIONS OF THE STANDARD MS-STD VERSION:

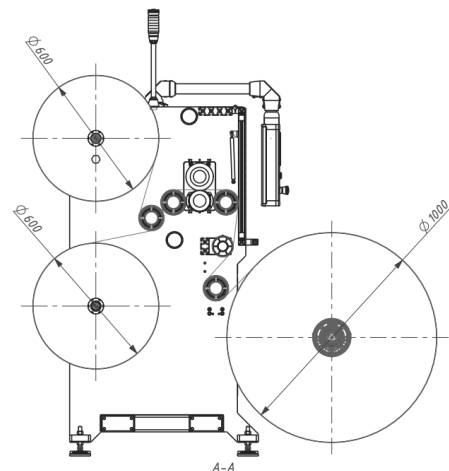
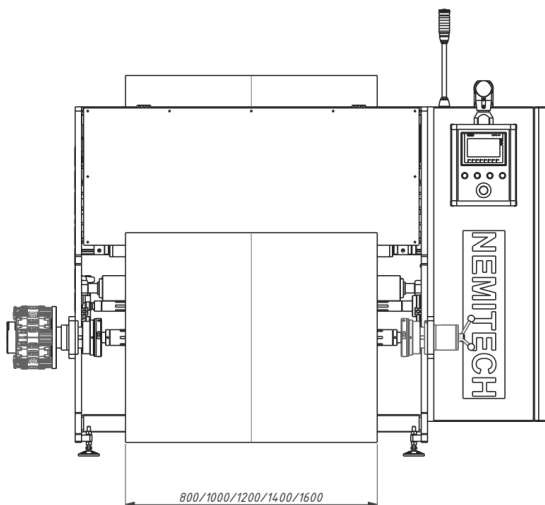


Slitter re-winder from NTS-STD. Machine e is designed for non-stretchable materials such as PVC, Alu and also paper. Great compact design and ergonomic dimensions are perfect to achieve maximum usability. Dedicated maximum speed is 100m / min.

Technical Data:

Types of material:	PVC, PP, PE, ALU, paper, nonwoven foils
Max. diameter of the material being wound:	600 mm - fixing 3 "expansion shaft (76mm)
Max. diameter of the unwound material:	1000 mm – fixing 3 "expansion shaft (76mm)
Max. weight of the material being wound up:	2x100 kg
Max. weight of the unwound material:	500 kg
Working width:	700 - 2000 mm
Breaks:	Pneumatic -RENOVA
Material fastening:	Expanding pins / expansion shafts mounted in heads. OPTION - adjustment shaft in the vertical plane.
Web tension control:	Automatic based on ultrasonic sensor. OPTION - possible measurement using strain gauges.
Carrying a ribbon:	OPTION - Automatic based on ultrasonic / infrared sensor
Material distribution:	OPTION - screw shaft
Discharging electrostatic charge:	OPTION - MEECH strips
Air pressure:	6-8 bar
Machine power:	ok, 6 kw
Touch panel / Control:	SIEMENS HMI 7"
Cutting system:	Circular - mechanical bindings OPTION - pneumatic fittings, razor / crimping system
Positioning of knives, material:	Laser positioner
Max. machine speed:	100 m/min
Number of knives:	10

Layout:



SPECIFICATIONS OF THE ADVANCED NTS-ADV VERSION:

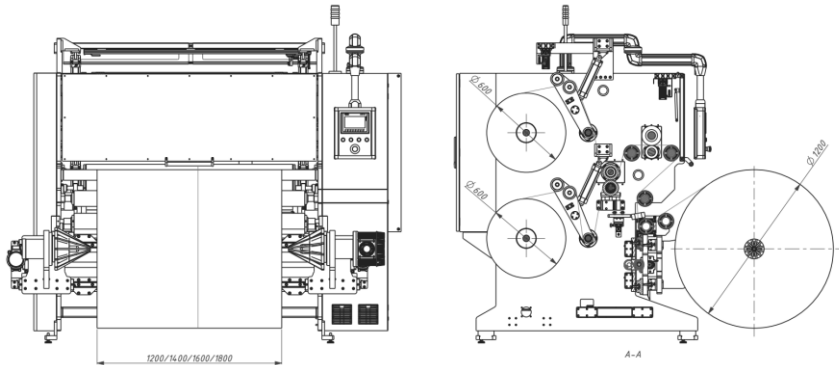


Slitter rewinder NTS-ADV. Machine is designed for materials that require additional equipment like: friction shafts, banana shafts, rewinder clamps, roll nip, extreme cutting system. Dedicated maximum speed is 300m / min.

Technical Data:

Types of material:	PVC, PP, PE, ALU, paper, nonwoven foils
Max. diameter of the material being wound:	800 mm – fixing 3 "expansion shaft (76mm)
Max. diameter of the unwound material:	1200 mm – fixing 3 "expansion shaft (76mm)
Max. weight of the material being wound up:	2x300 kg
Max. weight of the unwound material:	1000 kg
Working width:	700 - 2000 mm
Breaks:	Pneumatic -RENOVA
Material fastening:	Expanding pins / expansion shafts mounted in heads. OPTION - adjustment shaft in the vertical plane. OPTION - pneumatic spigots - downhill feet. OPTION - mechanical cones - downhill feet OPTION - setting the role from the "0" level
Web tension control:	Automatic based on ultrasonic sensor, OPTION - possible measurement using strain gauges. OPTION - dancing roller
Carrying a ribbon:	OPTION - automatic based on ultrasonic / infrared sensor
Material distribution:	OPTION - nip roll - separation of the unwinding / winding tension zone OPTION - screw shaft - unfolding material OPTION - banana shaft - unfolding material
Winding material:	3 "strip extension roller (76 mm) OPTION - friction shafts OPTION - pneumatic rewinder clamps OPTION - cutting off the extreme cutting: rewinder or pneumatic OPTION - manipulator for unloading packages - manual OPTION - manipulator for unloading the packages - automatic
Discharging electrostatic charge:	OPTION - MEECH strips
Air pressure:	6-8 bar
Machine power:	about 6 kw
Touch panel / Control:	SIEMENS HMI 7"
Cutting system:	Circular - mechanical frames, OPTION - pneumatic luminaires, razor blade system, crimping
Positioning of knives, material:	Laser positioner OPTION - automatic setting of knives OPTION - mechanical positioner, bumper with digital reading
Max. machine speed:	300 m/min
Number of knives:	10

Layout:



EQUIPMENT SPECIFICATIONS COMPARISON:

Symbols: S – Standard O – Optional N/A – Not Available

Input data:	STANDARD	ADVANCED
Max working width	1800 mm	1800 mm
Max unwinding diameter	1000 mm	1200 mm
Max winding diameter	600 mm	800 mm
Max weight of unwinding	500 kg	1000 kg
Max winding weight	2 x 100 kg	2 x 300 kg
Control - rotary panel with HMI display	S	S
Integration of the machine with ERP	O	O
Cutting system:		
The circular cutting system - mechanical frames	S	S
The circular cutting system - pneumatic frames	O	O
Razor cutting system	O	O
Crumpling cutting system	O	O
Laser positioner	S	O
Automatic installation of the knife system - pneumatic fixtures	N/A	O
Mechanical positioner - bumper with digital reading	O	O
Unwinding the material:		
Quick-release holders with 3 "(76mm) expansion shaft	S	S
Expansion heads 3-6 "reduction	O	O
Pneumatic pins - downhill feet	N/A	O
Mechanical cones - downhill feet	N/A	O
Setting the role from the "0" level	N/A	O
The shaft is adjustable in the vertical plane	O	O



Scrolling material:

	100 m/min	300 m/min
Max. Scrolling speed		
Tension control based on the measurement of the unwinding diameter	S	S
Tension control based on strain gauges	O	O
Tension control based on the dancing roller - "dancer"	O	O
Nip roll - separation of the unwinding / winding zone tension	N/A	O
Banana shaft	N/A	O
Screw shaft - distributing	O	O
Ionizing strips - receiving electrostatic charge	O	O

Winding material:

Expansion shaft 3 "(76mm)	S	S
Expansion heads 3-6 "reduction	O	O
Fritillary roller 3-6 "	N/A	O
Pneumatic material clamps	N/A	O
Pneumatic material clamps with web lock	N/A	O
Rewinding of extreme cutting	N/A	O
Pneumatic collecting of the extreme cutting	N/A	O
Manipulator for unloading packages - manual	N/A	O
Manipulator for unloading packages - automatic	N/A	O

DESCRIPTION OF EQUIPMENT:

Cutting systems:

Razor system:
- cutting in the fly or with a belt



Circular system (scissor)
- cutting in flight or with a belt
- mechanical or pneumatic fixtures

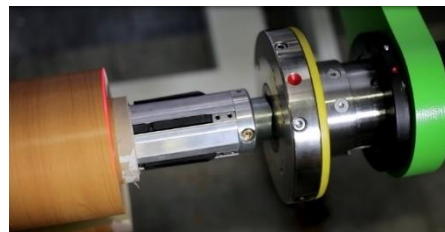


A crushing system:
- cutting with a belt



Laser positioning:

Positioning the edge of the material on the unwinding section,
Setting the position of the core on the winding shafts



Setting of knives:

Manual setting - manual
Based on the laser pointer,



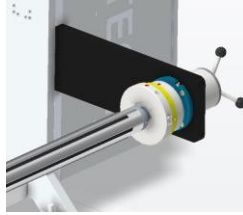
Automatic setting
Carrier positioner - positioning accuracy 0.2mm
NOTE - the system requires the use of appropriate knife holders



DESCRIPTION OF EQUIPMENT:

Unwinding the material:

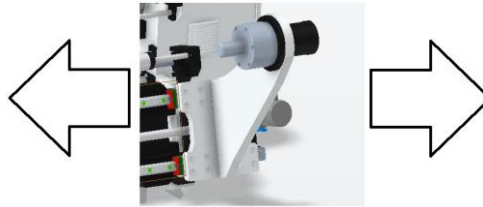
Quick-release holders with 3 "(76mm) expansion shaft
(different sizes available)



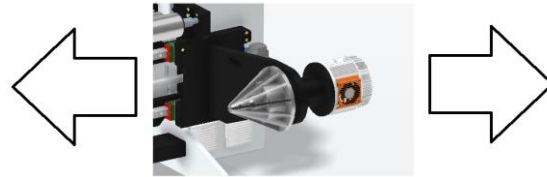
Expansion heads 3-6 "(76-152mm)
(different sizes available)



Pneumatic pins - downhill feet



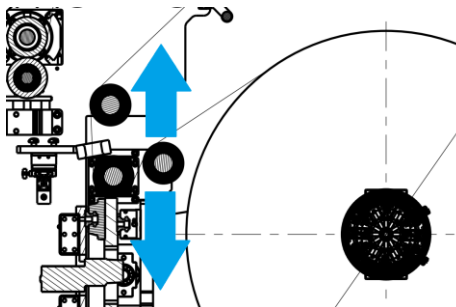
Mechanical cones - downhill feet



Setting the role from the "0" level



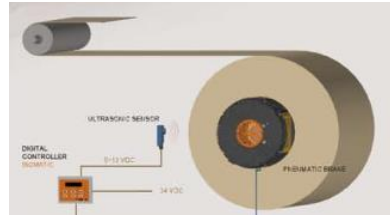
The shaft is adjustable in a vertical plane



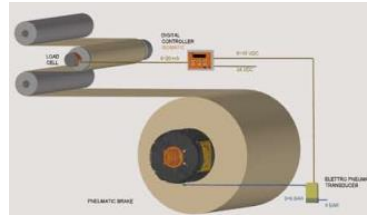
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Scrolling material:

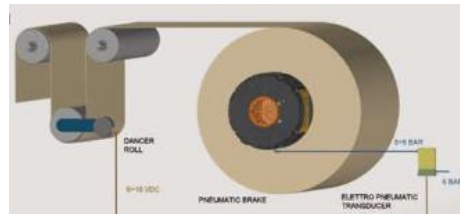
Tension control based on the measurement of the unwinding diameter,



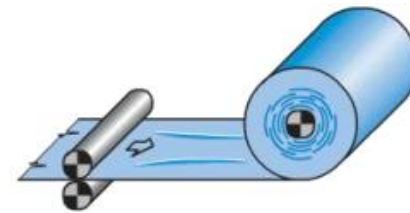
Tension control based on the measurement of extensometers,



Tension control based on a dancing roller - dancer



Nip - roll - separation of zones with different tensions winding / unwinding zone



Banana shaft - unfolding material



Screw shaft - distributing, unfolding material



De-ionizing strips - receiving electrostatic charge



DESCRIPTION OF EQUIPMENT:

Winding material:

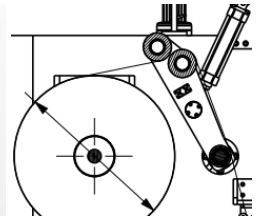
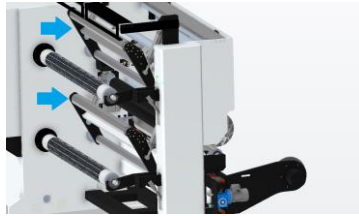
Expansion shaft 3 "(76mm)
(different sizes available)



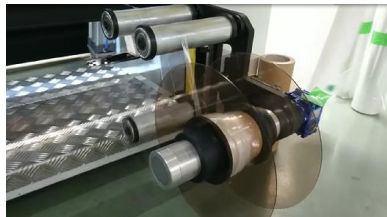
3 "(76mm) friction shafts
(different sizes available)



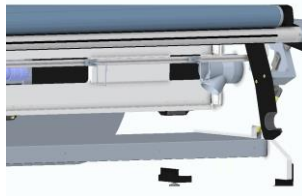
Pneumatic material clamps



Rewinding of the extreme cut



Pneumatic receipt of the extreme cut



Manipulator for unloading packages - manual



Manipulator for unloading packages - automatic





COMPONENTS WE USED:

MAIN CONTROLLER SIEMENS:

- Drivers PLC SIMATICS S7-1200
- Operator Panels SIMATICS HMI

SIEMENS

DRIVE CONTROL:

BOSH REXROTH:

- inverters series EFC 5610

LENZA

- inverters seriesSMV

Rexroth
Bosch Group
Lenze

SECURITY SYSTEMS:

OMRON:

- safety relays

TURCK:

- security curtain
- locking systems

SIEMENS

- limit switches
- device protection

OMRON
Industrial Automation

TURCK

SIEMENS

PNEUMATICS:

METALWORK

- air preparation systems
- pneumatic tubes
- pressure regulators
- control valves

METALWORK
PNEUMATIC

MAIN DRIVES:

NORD

- asynchronous motors
- conical and cylindrical
- motoreduktory

NORD
DRIVESYSTEMS

HYDRAULICS

REXROTH

- actuators
- power pumps
- hydraulic valves

Rexroth
Bosch Group

CONSTRUCTION SYSTEMS

RITTAL

- covers
- control cabinets
- rotary arm systems for operator panels-

RITTAL