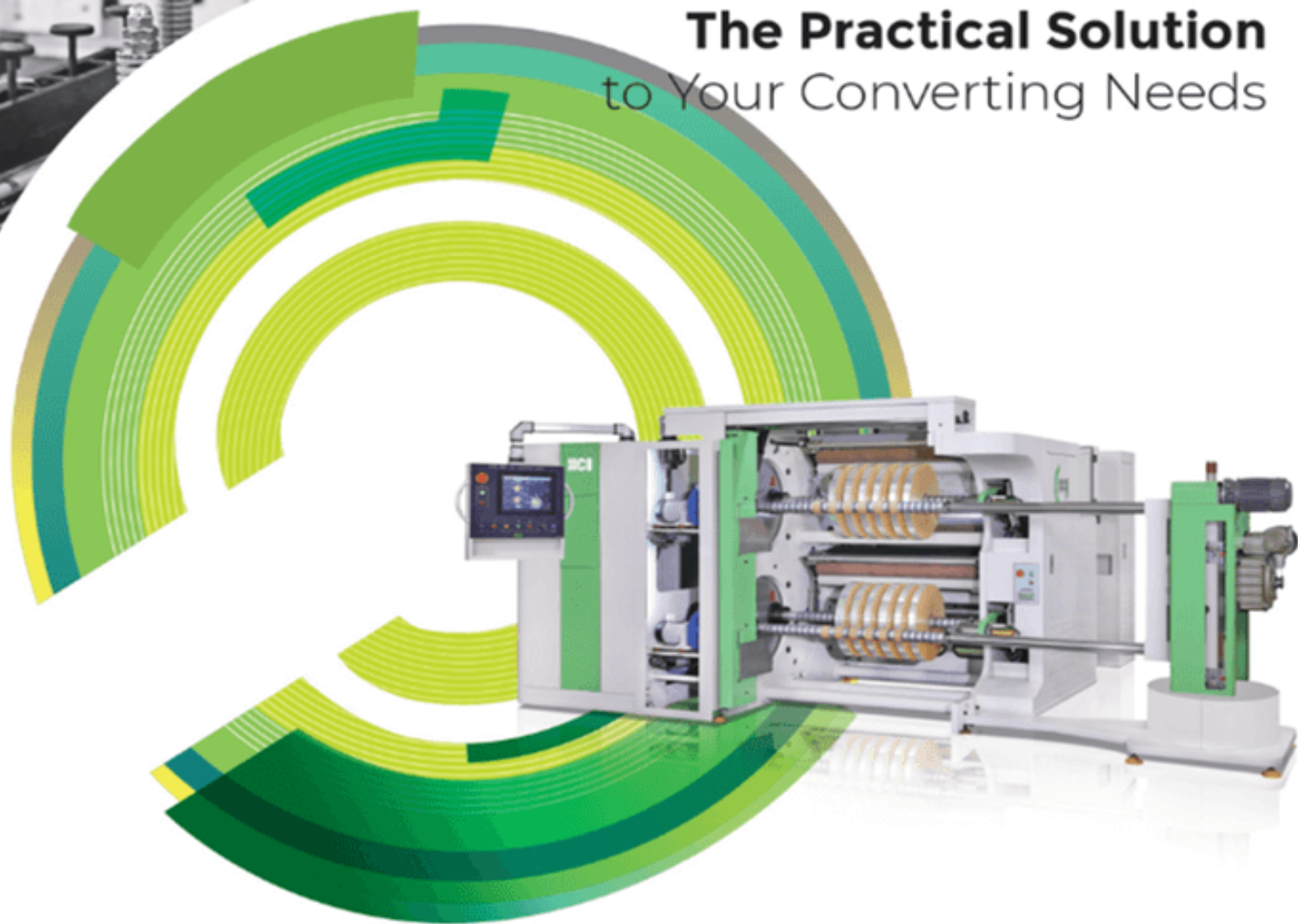




The Practical Solution to Your Converting Needs



韻同互華股份有限公司
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www.hci.cc

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Symbol of Dependable Quality

The Practical Solution to Your Converting Needs



Established in 1982, HCI is a specialist in the design and manufacture of a full range of Roll-to-Roll and Roll-to-Sheet converting equipment for flexible packaging, medical packaging and optoelectronics industry. From single machine such as, Slitting Machine, Rewinding Machine, Laminating Machine, Bag Making Machine to whole plant equipment, HCI always provides customers with the most practical solution with competitive price.

Based on 40 years machinery technology and perfect after-sales service, HCI serves customers worldwide with excellent reputation. Each HCI machine is subject to rigorous quality inspection and performance tests before shipment to ensure the best possible performance. HCI is the symbol of dependable quality.



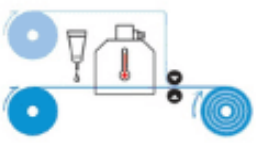
HCI Advantages and Competitiveness

- ④ 40 years of manufacturing experience, providing professional technical solution.
- ④ More than 4,000 units of slitter/rewinders installed worldwide.
- ④ Efficient after-sales service team with thousands spare parts stock can provide rapid respond to customer's maintenance requirements.
- ④ Full range of products line provides turn-key solution of lamination, inspection, slitting and sheeting process.
- ④ Various options can be combined to create a machine which most fits customer's needs.
- ④ High quality at competitive price, machine be designed with a practical performance, stable and durable quality.
- ④ Set up well appointed parts division with machine tool including CNC Lathes, Milling machine, etc. to manufacture machined parts, holding the core technology.
- ④ With professional R&D team, integrated 3D mechanism design with control system for customized project.

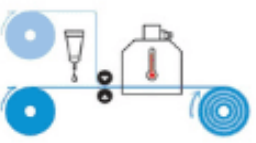


01 Coating / Laminating P15-16

Coating or Roll-to-Roll lamination process for film / paper/ foil, such as multi-layer film for poly bag making, cigarette box wrapping and lid of yoghurt cups.



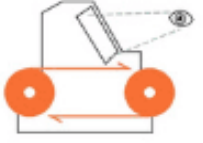
Dry Laminator **FLM-DRY**



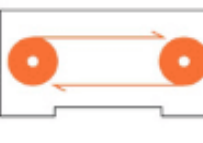
Wet Laminator **FLM-WET**

02 Rewinding / Inspection P12-14

Roll-to-Roll rewinding and inspection process for tension correction, edge alignment and defects inspection.



Reversible Inspection **FSE**



Reversible Rewinding **FSR**

03 Slitting / Trimming / Rewinding P05-11

Suitable for all major type of film, paper and laminated material for flexible packaging and electronic industry.



Central Winding **FSL-TX**



Surface Winding **FSL-BT**

B Shrink Sleeve Making P23-24

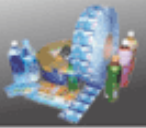
Shrink sleeve making for packing of variety of bottles and cap seal from PVC, PET or POF. Character of heat shrink sleeve fits the body shape of the container, compare to labeling, shrink label offers better demonstration of the products. HCI provides seaming, inspection and cutting, turn-key solution of shrink sleeve making.



B-1 Seaming



Seamer **FP**



B-2 Doctoring



Doctoring (Reversible) **FSP**

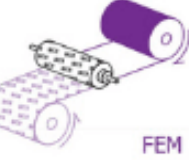
B-3 Cutting



High Speed Cutting **FSC-201**

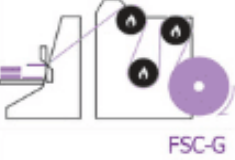
C Related Equipment P25-26

C-1 Embossing



FEM

C-2 Flatten & Sheeting



FSC-G

C-3 Micro Perforation



HP

C-4 Thermal Film Laminating

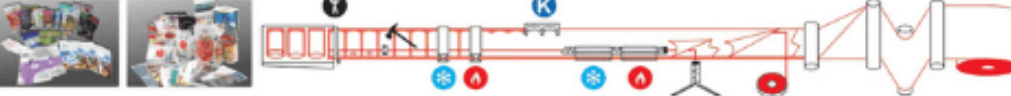


FLM-E

A Pouch Machine for Flexible Packaging P17-22

Suitable for pouch making from heat-sealable multi-layer film for food packaging, electronic industry and medical industry. All pouch making process can be completed in one machine, including material forming, zipper attaching, sealing, punching and cutting operations.

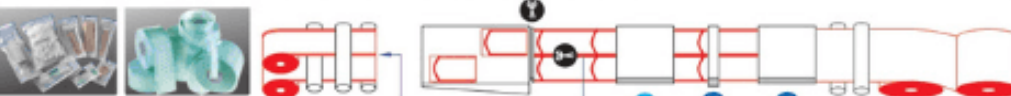
A-1 FTSC-V Three Side Seal / Stand Up / Zipper Pouch Making Machine



A-2 FKSC-V Center Seal / Side Gusset / Four Side Seal Bag Making Machine

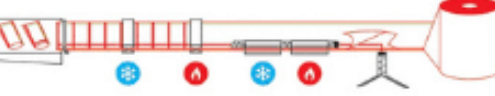


A-3 FSC-V603-2 Sterilization Pouch / Reel Making Machine



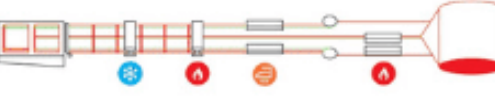
A-4 FSC-303-1

Economical Center Folding Zipper Pouch Making Machine



A-5 FK/FSC

Economical Center Seal Pouch Making Machine



STRENGTHS

Roll-to-Roll slitter/rewinders is one of HCI's major products, to be used in flexible packaging, paper, label stock and optical thin films industry. More than 4,000 units sold worldwide since established. Based on the design and manufacturing experience, HCI developed a series of slitting machine with different functional options and flexible web path availability. From the unwinder type, cutters, tension controller to differential ring width are all available for customer to build up a slitter which most meets his requirement.

FSL-TR

Turret Rewind Slitting Machine



HCI's newly launched FSL-TR1300 turret rewind slitting machine is designed for automatic slitting and rewinding operations, with automatic splicing and roll changing, stand-by paper core auto positioning, finished roll pusher and unloading device to increase productivity and reduce the operation down time. The HMI operating system equipped with a color touch screen provides easy-to-learn operations and memory of operating parameters, which makes the product quality stable.

FSL-TR

Unwind web width (mm)	320-1300
Mechanical speed (m/min.)	500
Unwind inner diameter (mm)	76 / 3" or (152/6" Optional)
Max. unwind diameter (mm)	1000
Guide movement (mm)	±75
Min. slit width (mm)	50
Max. rewind diameter (mm)	600

PLC & HMI Control System

- 15" color touch screen with graphical user interface.
- Remote connection modification function.
- Slitting with setting function.
- Production mode can be selected between manual/semi automatic/fully automatic.

Main Drive & Rewind Tension Control

- Four individual motors control the main drive, upper and lower rewind shafts and turret rotation separately.
- Non-stop automatic shaft change support device (Patent No. M020523)

Unwind Web Guiding Device for Web Alignment

- CCD photocell for printing line and edge.
- Lateral movement up to ±75 mm.

Unwind Tension Control

- Motor driven control.
- Disc brake can be used instead.
- Loadcell + Dancer Roller auto feedback control.

Flexibility and Modularity

- Capable of adding inspection / splice table.
- Capable of adding microscope.
- Overhead web path offers a hygienic work environment.

Shaftless Unwind Stand

- Left/right unwinding frame can move together or separately and with pneumatic clamping function.
- With hydraulic system lifting from floor level to working position.
- Additional remote controller on unwind side for major setting.

Unwind Side

Rewind Side



Turret Rewind Device

- The upper/lower rewinding shaft set is equipped with two ball-type differential shafts, and with a roll diameter calculation system to automatically control the rewinding tension.
- Automatic cutting, pasting and change winding shafts when the pre-set length or rewind OD is reached.

Various Automation Equipment

- Auto cutting and pasting.
- Finished roll pusher.
- Paper core auto positioning.
- Turret rotation and up/down unloading.

SLITTING SERIES

FSL-TX

800mm Rewind OD Slitter Rewinder



800 Rewind Slitter Rewinder has been purposely designed for large rewinding OD requirement, for slitting product OD as large as 800mm and line speed up to 400m/min. Solid shaft-less unwind stand design for roll weights over 1 ton, shortest web path design, all cutter set up can be completed at the front of the machine. With all new rewinding shaft technology, it is suitable for slitting and rewinding of all kind of film roll of uneven thickness.

- PLC & HMI Control System
- Various user-friendly options:
 - Finished roll pusher
 - Turnet type unloading tree
 - Inspection / Splicing table
 - Stroboscope or camera inspection system

- Main drive & rewind tension control
 - Three individual motors control the main drive, upper and lower rewind shafts separately
 - Rewind tension auto control by differential rings with programming calculation system, keeps the tension stable at varies speed and product OD.

- Dual slitting knife system
 - Equipped with razor groove blade and shear knife for interchange.
 - Vacuum trim removal system, simple to operate and the suction is sufficient to pull a broken scrap trim.
 - Upgraded slitting air knives system (option), equipped with interchangeable pneumatic upper circular knives holder and razor blade holder, matched with segment type of multiple grooved bottom knife blocks which fixed by the inflation shafts fixing system.

- Shaftless unwind stand
 - Loftlight unwinding frame can move together or separately and with pneumatic clamping function.
 - With hydraulic system lifting from floor level to working position, fixing height type also available.
 - Additional remote controller on unwind side for major setting.



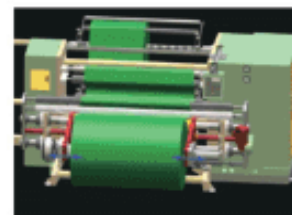
FSL-T

Superior Type

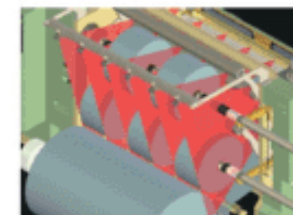


- The most popular model, designed for slitting all types of flexible packaging films, optical film and paper. The HCI FSL-T is a universal Slitter Rewinder on the market.
- Unwinding and rewinding on the different side, with comfortable operation space.
- Three motors driving system, rewinding direction changeable.
- Both unwind and rewind tension auto control, detect the reel OD and adjust the tension output automatically.
- Shaftless unwind stand with pneumatic clamping, quick system for unloading by one operator.
- Web guiding device detects printing line or edge to ensure web alignment.
- Dual slitting system: razor in groove roller & shear knives. Safety cover for slitting zone.

- Vacuum trim removal system pulling the scrap trim properly at 300m/min line speed.
- Standard side-pressure type differential rings suitable for mid-high web tension required, axial-pressure ball type differential rings are available for low-mid web tension required (option).
- Four sets of section type pneumatic rewind lay-on roller touch the each slit rolls properly.
- PLC with HMI control system, touch screen for parameter setting including:
 - Alarm / auto stop setting for master roll running out or web broken.
 - Machine auto stop by achieving pre-set rewind OD or length.
 - Tension setting simulation.
 - Memory for parameter setting recipes.
- Various options such as turnet type unloading tree, laser beam core positioning or CE conformity are available.



Shaftless & pneumatic-chuck unwind stand



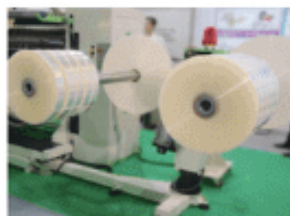
Laser core positioning



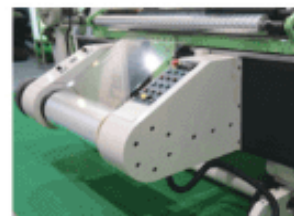
Dialogue parameter setting environment



PLC Control System



Turnet Type Unloading Tree



Shaftless & Hydraulic up/down Unwind Stand

FSL-TX

FSL-T

Unwind web width (mm)	1300, 1600	1300, 1600, 1800, 2000
Mechanical speed (m/min.)	400	300
Unwind inner diameter (mm)	76 / 3" or (152 / 6" Optional)	
Max. unwind diameter (mm)	1000	
Guider movement (mm)	+/- 75	+/- 50
Min. slit width (mm)	50	
Max. rewind diameter (mm)	800	600

SLITTING SERIES

FSL-KT

Integration Type



- Hybrid model which combine with the advantages of FSL-T & FSL-K model, most economical way upgrading to automated slitting machine.
- Three motors driving with PLC control system.
- Movably unwind stand can be adjusted at one end for film thickness uneven issue.

- Lift-out type unwind air shaft, easy for master roll uploading.
- Equipped with rewind differential ring for film thickness issue.
- Cantilevered rewinding shafts with products discharging tree to increase production efficiency.
- Equipped with onboard trim winder.

FSL-BT

Surface Winding Type



- For slitting thin and slip plastic films of uniform thickness, such as laminating paper, aluminum foil, liner and other paper rolls.
- Floating unwind stand, master roll can be adjusted left/right and forward/backward.
- By surface winding shafts, rewinding right after slitting to ensure products edge alignment.
- Two rewinding shafts controlled by separate motors for tension control.

- Rewind shafts auto rising/lowering mechanism helps unload heavy rolls.
- Onboard blower and winder for trim removal.
- PLC with graphical interface HMI control panel to provide accurate and stable tension including unwind tension auto control, rewind tension auto control, no-slip memory and machine auto stop by achieving pre-set rowed OD or length.

FSL-K

Standard Type

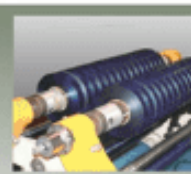


- Over 1,400 units sold, various options can be combined.
- Unwinding and rewinding on the same side, easy accessibility to setting operations.
- Equipped floating unwind stand with standard specification, vines of separate unwind stand are also available.

- Web tension controlled by powder brake (unwind) and clutch (rewind), easy to access operation.
- Cantilevered rewinding shaft with friction ring enhance quick changeover ability.
- The transmission mechanism is specially designed to ensure stable operation and perfect edge smoothness.

FSL-J

Narrow Width Slitter



- For narrow web slitting of all kinds of high grade thin paper, cellophane, plastic film and aluminum foil. Especially suitable for positive and negative foils of condenser and electrolyze paper.
- By surface winding shafts to ensure products edge alignment.
- The rollers are tightly arranged to decrease tolerance of cross and longitudinal winding of material to have excellent winding stability.

- The winding and feeding motions are driven by a universal satellite gear transmission. The speed can be easily varied to accommodate tension difference caused by the changing diameter of the winding material.
- Rewinding shafts quick changeover design to save set up time of each slitting jobs, shaft size can be customized upon requested.
- Minimum slitting width can narrow to 5mm (option).

	FSL-KT	FSL-K	FSL-BT	FSL-J
Unwind web width (mm)	1000, 1300, 1600, 1800, 2000	1000, 1300, 1600, 1800	1000, 1300, 1600, 1800	600, 800
Mechanical speed (m/min.)	300	200	200	100
Unwind inner diameter (mm)	76 / 3" or (152 / 6" Optional)			
Max. unwind diameter (mm)	800 (1000 Optional)	700 (1000 Optional)	600 (1000 Optional)	500
Guider movement (mm)	±50			
Min. slit width (mm)	50		20	5
Max. rewind diameter (mm)	450		500	270



SLITTING SERIES

FSL-D

Small Roll Slitter



- This machine is ideal for slitting large parent rolls into small bobbin rolls for the applications of POS, ATM, cash register, ticket/coast, thermal paper, fax, lottery, medical report and various office use paper rolls.
- Shear knife cutter suitable for paper roll slitting.
- Lift-out type rewinding shafts for quick changeover, shaft size upon request.
- By using patented magnetic powder type surface rewinding design allowing product tension to be easily adjusted according to material type. It also reduces wear on the driving rubber roller.

- End roll warning device, for reminding the user to change the roll when the warning mark appeared.
- Various options such as pneumatic controlled lay-on roller, products discharging table and paper auto insertion device are available.

FSH-N

Heating Side Sealing Slitter



- Suitable for the slitting and side-sealing process of HDPE, LDPE, PP and CPP, both from sheet form and tube form, also for regular slitting process for flexible packaging application.
- Dual slitting knife system: razor blade and heating knife.
- Pneumatic controlled heating knives up/down to ensure sealing quality.
- The cantilever (swing out) rewind and unwind shafts can be easily handled by a single operator.

- V-board for converting web form sheet to tube form (option).
- Electric heating knife system, each knife can be set and displayed separately by using PID controller to have excellent sealing quality. Suitable for multi-roll products and the material needs precise sealing temperature.

FSL-D

FSH-N

Unwind web width (mm)	600, 800, 1000	1000, 1200, 1500
Mechanical speed (m/min.)	150	Side Sealing 20-40, Slitting 100
Unwind inner diameter (mm)	76 / 3" or (152 / 6" Optional)	
Max. unwind diameter (mm)	600 (1000 Optional)	600
Guidar movement (mm)	±/- 50	
Min. slit width (mm)	40	50
Max. rewind diameter (mm)	150	450

REWINDING SERIES

FSR-2

Reversible Rewinding Machine

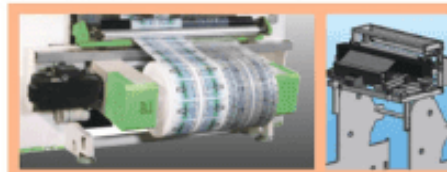


- Cantilever with shortest web path compact design, for correction of the edge alignment and tension of slit roll.
- Both unwind and rewind equipped with servo-motor for precise tension control. The winding direction can be changed any time, and with forward/reverse jogging functions.
- Pivot Frame Web Guiding Systems to keep web material properly aligned during processing, convert the NG roll to pass QC.
- PLC & HMI touch control system with rewind tension Manual / Auto mode, web running out and pre-set length Auto stop, Auto reverse to memory point functions.

- Various width and options are available.
 - Dancing roller device suitable for stretch and tension sensitive film.
 - Splice table with stroboscope for print inspection and quality control.
 - Razor cutter for trimming process.

FSE-2

Reversible Rewinding & Doctoring Machine



- Inspection of printing or lamination defects, also for re-rolling operation of slit rolls with uneven edge or tension.
- Both unwind and rewind equipped with servo-motor for precise tension control. The winding direction can be changed any time, and with forward / reverse jogging functions.
- Equipped with shaftless unwind stand and web guiding system keeps products edge alignment, rewind air shaft with pneumatic controlled lay-on roller, different width reel can be rewound without changing lay-on roller width which makes ease and rapid job changes in operation.

- Equipped with inspection board and stroboscope for visual checking.
- 100% camera inspection and labeling device are available (option), instead of vision inspection by human eyes to get zero defect finish products.
- PLC & HMI touch control system with rewind tension Manual / Auto mode, web running out and pre-set length Auto stop, Auto reverse to memory point functions.
- Defects area memory and auto reverse function, operator can reverse the roll to detected point immediately or reverse it till whole roll rewinding completed.
- Optional razor cutter for trimming process.

FSR-2

FSE-2

Unwind web width (mm)	300, 350, 400, 600	600, 1000, 1300, 1600
Mechanical speed (m/min.)	250	300
Core inner diameter (mm)	76 / 3" or (152 / 6" Optional)	
Max. unwind diameter (mm)	600	800 (1000 Optional)
Max. rewind diameter (mm)	600	800 (1000 Optional)
Reversible	V	

REWINDING SERIES

FSE-CP / HP

Rewinding Machine / Continuous Punching / Heating Perforation



- Single winding direction, entry level rewinding/inspection machine.
- Optional continuous punching device is available, the punching positions can be adjusted programmatically. (Hole Dia. 2mm-50mm)

- Optional thermostatic control hot needle micro perforation device is available.
 - Equipped with a well-insulated temperature control box provides stable temperature to the needle roller both internally and externally by thermal controller.
 - Segment type needle sleeve can be rearranged to set different width and pitch for different patterns.

FSR-600

Rewinding Machine



- Unwind and rewind on the same side, easy to access rewinding operation for correction of reel edge or uneven tension.
- The cantilever (swing out) rewind and unwind shafts can be easily handled by a single operator.
- Equipped with high precision web guiding system to turn the defective products into qualified products.
- Equipped with fine adjustment pivot guide web guiding system to turn the defective rolls into qualified products.

- Loadcell type of auto tension controller keeps the rewinding tension constantly.
- Rewind tracing roller mechanism which can vary with rewind diameter to maintain the same winding angle. This mechanism can improve the rewinding quality greatly.
- PLC with HMI control system, touch screen for parameter memory and auto stop at pre-set length.

FSP-250-2

Re-reeling & Doctoring Machine



- Cantilevered unwind air shaft for quick change over, the roll diameter can reach to 700mm with 2 different web path for inspection of printing defects or seaming quality.
- Both unwind and rewind by motor driven, allow the winding direction changed during operation. Load cell type tension controller to ensure the rewinding tension stable.
- Equipped with web guiding system (forward direction) creates an extremely neat edge, also can have extra ultrasonic sensor upgrading to CPC central guiding and SPC oscillation function.
- Equipped with observed board and fluorescent lamps for visual checking, also can have an inflation checking system (option) for checking seaming quality.



- Splicing detection and automatic reverse function.
- HMI touch screen control panel for tension setting, parameters memory, preset meters stop and memory reverse function.
- On-line web width measuring system and camera full inspection device are available (option), machine width can be updated to 500mm upon request.

FDE-600

Aluminum Foil Rewinding Machine



- Designed for rewinding and distributing big rolls of aluminum foil into small ones.
- Swing out type unwind stand, single operator is required to operate the machine.
- Auto rewinding shafts exchanging mechanism provide the nonstop production.

- Flexible accommodation of paper cores in various diameters.
- Equipped with meter counter which can stop the machine automatically when preset length reached.

	FSE-CP / HP	FSR-600	FSP-250-2	FDE-600
Unwind width (mm)	1000, 1300	600, 800	250, 300, 500	600
Mechanical speed (m/min.)	250 / 150	200	400	100
Max. unwind diameter (mm)	600		700	400
Max. rewind diameter (mm)	600		700	Max. rewind length 20m
Reversible	X		V	X



LAMINATING SERIES

FLM-WET

Wet Laminating Machine



Application

Suitable for laminating all types of paper, film, and aluminum foil, such as, cigarette box wrapping, lunch and cake boxes, etc.

The major difference from dry lamination is wet lamination has the 1st web laminates to the 2nd web right after adhesive coated and passing through the dryer together.



Secondary unwinder



Web guiding system

- The motor speed and tension are synchronized in motion which improves laminating quality and stability.
- Steel coating roller incorporated with pressurized rubber roller assures extremely uniform coating thickness and surface smoothness.
- Glue tank with pneumatic ascend/descend device.
- Four zones and straight dryer provide superior drying performance. All the aluminum rollers in the dryer are driven by chain preventing from material scraped.
- Equipped with PID temperature controllers and waste gas exhausted disposal system.
- Equipped print frame web guiding system providing the most accurate control of product edge alignment.
- Surface winding structure keeps the proper tension to laminated products without excess adhesive.
- With PLC & HMI control system, the operation parameters such as unwind tension, rewind tension, temperature, speed are set digitally. Machine auto stop functions on material running out or break. All values setting and displaying are clear for ease of operation.

Patent roll width (m/m)	1000, 1200
Mechanical speed (m/min.)	150
Max. patent roll diameter (m/m)	Paper - 1150 mm Al. foil - 600 mm
Max. adhesive coater laminating roll diameter (m/m)	1000
Coating method	Rubber roller

FLM-DRY

Dry Laminating Machine



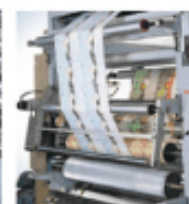
Application

The FLM Dry Laminating Machine is specially designed for roll laminating operations of flexible packaging materials such as BOPP, CPP, PET, PE, Nylon, Aluminum Foil, and a variety of multi-layer films as well as performing surface treatment.

FLM-DRY-P	Thermal oil heating system
FLM-DRY-H	Electric heating system
FLM-DRY-S	Gas heating system
FLM-DRY-S-2	Gas heating system + double sided coating



Auto roll changing device



Coating unit

- Tension problems during the laminating process are eliminated by use of the micro location offset via dancing roller control systems, which allow for foil (6 micron) to laminate with other various films. It provides the most stable tension even the material has passed through the dryer and been affected by the temperature.
- The synchronized motion of the laminating and gluing devices is of a non-shift design which fully eliminates accumulated tolerance and improve the ease of movement of both semi- and fully-completed products during operation.
- Master roll and laminated roll auto exchanging is achieved by motorized turn rotation mechanism, improve the lamination and continuous production efficiency.
- Gravure coating roller incorporated with isopropylating doctor blade assures extremely uniform coating thickness and surface smoothness.
- Coating section also equipped with LCD touch screen. It is convenient for machine pre-run settings such as glue adjustment, hot melt temperature setting, doctor blade movement and gravure coating roller cleaning.
- Different options of drying: Electric heating or Thermal oil or Gas heating or Electric + Gas (hybrid) system.
- Customized dryer upon request, such as the 5th (additional) drying section or double layer dryer, also can have extra coating section for double-sided or double-layer coating.

Patent roll width (m/m)	1000, 1300
Mechanical speed (m/min.)	150
Max. patent roll diameter (m/m)	600
Max. adhesive coater laminating roll diameter (m/m)	800
Coating method	Gravure mesh rotary type

STRENGTHS

The bag making process is concerned with several of technology to produce bags from roll form material, which including continuously feeding web tension control, intermittent feeding web tension control, forming mechanism, add-on equipment, temperature and pressure of longitudinal / transverse sealing and cooling section, cutting length control and conveyor system. More than 1,000 units sold worldwide since established. Based on the design and manufacturing experience, HCI has excellent design and integration ability. HCI's pouch machine with the benefits of accurate products dimension, high sealing strength, quick changeover, minimize the waste on re-start operation, high speed production and durable machine structure.

FTSC-V

Servo In Line Three Side Seal Bag/Stand-up Pouch/ Zipper Pouch/Four Side Seal Bag Making Machine

Suitable for sealable co-extrusion films, multi-layer films such as laminates of Polyester, BOPP, and CPP... This machine is ideal for the production of 3-side sealing bags, stand-up pouches, bottom gusseted stand-up pouches, zipper bags, combined stand-up/zipper pouches, four side seal bag...

	FTSC-V500-3	FTSC-V600-3
Unwind width (m/m)	300-1000	400-1200
Mechanical speed (bags/min.)	200	180
Max. unwind diameter (mm)	600	
Length of product (mm)	30-500	
Width of product (mm)	75-500	75-600
Feeding speed (m/min)	30	



Main Structures

- Outer transmission mechanism: Compared with inner transmission mechanism, the structure of brand-new outer transmission mechanism is much simple and easy to maintenance, and gives about 30% more productivity than conventional bag making machines.
- Brand new design unwinder: Material feeding roller is changed to horizontal direction to make the web more stable, accompany with linear position sensor control system, the dancer roller keeps the feeding speed and tension constantly, auto raising during web splicing and "immediately stop" when material broken.
- Main drive servo motor: The operator can change the feeding and sealing time for each material independently, sealing temperature adjustment unnecessary while machine speed up. This Mechanism can help to reduce the waste of material greatly.
- Feeding servo motor*2: The pouch length is accurately controlled by servo motor includes middle pulling stand and rear pulling stand for upgrading production speed.
- Outer servo motor control system: The cutting speed is variable and the double cut function can eliminates burrs on in-line corner or notch puncher. This function improves the products quality.

Zipper/Side Sealing/Bottom Sealing Section

- The latest development of zipper pouch sealer and side sealer auto descending device (Patent No. M355902) which can prevent the material been overheated or broken when machine stop.
- HCI zipper guiding and cooling plate (Patent No. 178721): This plate can steady the sealing position of zipper and the cooling circulation system can prevent the zipper pouch been overheated.
- Ultrasonic sealing device: it can weld the zipper rib in advance before entering the bottom sealer. The bottom sealed position will be flattened and perfected without leakage problem.
- The new skip-seal structure adopts the pneumatic control stopper to block the heat-sealing bar to descend. The structure is simple and durable, and can also be used for the zipper sealing depth control to avoid the sealing area broken.
- Each bottom sealing unit can replace embossing plate with silicon plate; the operator can change the sealing arrangement for actual demand.
- Microprocessor PID temperature controllers work with SSR (solid state relay). The system can provide the most accurate and fastest heating performance.

Cutter Structure and Safety Protection

- Varying Cutter Structure reduces unnecessary contacts between upper and lower cutters while enhancing cutter lifetime and restraining operational noise. (Patent No. M355604)
- Newest cutter unit with easy adjustment and durable structure. The cutter unit can adjust the position from single side or whole unit moves front and rear.
- Upon request, several extra safety devices are available - movable protecting cover for heat sealing section, safety light curtain, cutter cover and interlock switch.

Capable of Producing Various Type Bags

- Three side sealed bags * 2: Can produce 2 lanes of 3-side sealed bags and products length can reach to 1200mm(Max.) by its skip-seal function.
- Stand-up + Zipper * 2: Can produce 2 lanes of stand-up pouch or zipper pouch or stand-up with zipper pouch.
- Folded Bottom Gusset Pouch * 1: Equipped with the gusset device on main machine with additional dancer roller, gusset depth from 20-70MM, stable forming with fast bag making speed.
- Four-Side-Sealed bags * 1: Can produce it by using 2 reels of bottom insertion.
- Spout pouch or micro-perforated pouch making function are upon request.
- Die cutting machine is available for producing shaped pouch.

HMI Control System

- Color touch screen with simple figure display for setting and easy operation. Intuitive malfunction detects system: monitor items include motors, inverters, control box communications, punchers, sensors, sealing temperatures etc... and the abnormal position will display on LCD directly. It is very convenient for operators to obviate the malfunction immediately.
- Three pouch making control modes:
Speed Mode - Sealing time varies with cutting speed
Sealing Time Mode - Cutting speed varies with sealing time
Extension Sealing Mode - Speed varies with heating extended time, suitable for thicker film
- Temperature upper and lower limit alarm: the operator can alter the range of limit and auto stop function and the sealing temperature will vary with machine speed and the increasing rate can be changed.
- Operation parameters could be saved in system such as cutting speed, pieces, length, temperatures etc. and those parameters will be saved automatically when power failure happened.

Optional Accessories

- Secondary unwinder and web registration device for produce bags from 2 different reels.
- The splice auto-detection function automatically detects the joint of the web, gusset, and zipper, and prevents defects by pausing cutting until the joint passes the cutter.
- Web guiding device on middle of machine to guide the web after forming / sealing and before trimming, can increase the bag quality and reduce the waste and operation adjustment.
- Various punching device available, such as round hole, butterfly, Mexican hat hanging slot and handle puncher, notch etc. All size are upon request.



CE



BAG MAKING SERIES

FKSC-V

Servo in Line Center Seal Bag/Four Side Seal Bag/Gusset Bag Making Machine



- Main drive and material feeding by servo motor which providing the constant sealing time even cutting speed varied.
- The outer transmission mechanism structure is simple, durable and easy to maintain.
- Horizontal unwind stand and with swing-out or lift-out 3" air shaft.
- Equipped with EPC web guiding system which assured the accuracy of the position of printing design after forming and bag making.
- Unwind stand gussing device, only 3 pieces of mold plate are required to finish all sizes of gussing.
- Equipped with middle gusset forming unit, for side gusset forming, ironing and pre-heated flatten to enhance the stability of forming and gussing.

- Equipped with 3 sets of bottom sealing devices and 1 set of bottom sealed cutters. The sealing temperatures can be set independently to ensure the sealing quality and improve production speed.
- Center and bottom sealer auto ascending device which can prevent the material been overheated or broken when machine stopped.
- The machine employs a contrast scanner combined with a servo system for accurate positioning. It not only eliminates repetitive error on sealing position but also provides high cutting accuracy.
- Newest cutter unit with easy adjustment and durable structure. The cutter unit can adjust the position from single side or whole unit moves front and rear.
- Color touch screen with simple figure display for setting and easy operation.
- Operation parameters can be saved in system such as production counter, auto stop on material running out or photocell malfunction, skip-seal and operation parameter recipe, etc.

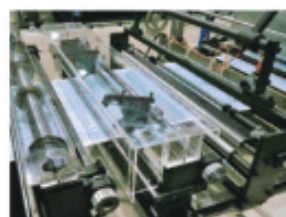
FKSC-V

FSC-V603-2

Material width (mm)	200-1050	400-600
Mechanical speed (bags/min.)	200	130
Max. material diameter (mm)	600	600 (upper) / 800 (lower)
Bag Length (mm)	30-400	50-500
Bag width (mm)	75-500	100-600
Max. feeding speed (m/min)	30	

FSC-V603-2

Medical Sterilization Pouch/Reel Making Machine



- It is specially designed for the production of medical sterilization pouches and reels. The sterilization reels making machine can be produced in multiple lines and with four-shafts winding station, which greatly improves the production efficiency.
- Twin shafts unwind stand suits for paper and plastic film, two layers of different materials unwinding.
- Main drive by servo motor driven and heat sealing time can be varied according to pouch material type. Sealing temperature does not require adjustment while the machine mechanical speed changed.
- Sealing mechanism utilizes external drive system which is simple and easy to maintain and up keep.
- Sealing embossing device utilizes compact cylinder delivering well balance all round pressure to the top and bottom sealing molds, keeping material deformation within 0.01mm during sealing process, delivering stronger seal and neat bond.

- Sealing temperature can be customized to utilize 4-6 independent temperature controller according to customer's requirement. Every set of temperature controller comprises of heaters, thermocouples and PID thermal controller. Each temperature controller will independently controls each zone.
- Using heat distribution technique, temperature on each embossing plate is kept within $\pm 2.5^{\circ}\text{C}$, ensuring zero sealing defect.
- Customized sealing mold pattern with track type docking for easy changing of embossing sealing mold to meet different order.
- New inline products partition and trimming design allows shear knife changing or slitting width changing without removing knife shaft, greatly reduces the changeover time improve the production efficiency.
- Header bags can be produced by special machine with precise control of tension, sealing temperatures and pressure for film, Tyvek those four-layer materials.
- Different functional options such as gusset bags making, taping and perforation device, water cooling device, conveyor, single or twin shaft rewinder, etc. are all available for customer to build up a medical pouch making machine which most meets his requirement.

BAG MAKING SERIES

FSC-303-1

Economical Center Folding
Zipper Bag Making Machine



- Designed for producing single lane of zipper bag, quick change over time, minimum waste, it's the best solution for short run order.
- Equipped simplified unwind folding device, can be upgraded to horizontal unwinder.
- The AC motor driven unwind with dancing roller unit for auto speed varied and assures that the most stable web feeding even under high speed operation.
- Equipped zipper feeding, sealing and cooling device, with HCL zipper guiding and cooling plate to improve the stability of the sealing position of zipper and the cooling circulation system can prevent the zipper pouch been overheated.

- Three-step sealer design : 2 upper and lower sealing sections, 1 upper sealing section and 1 water cooling section, producing an airtight seal. Especially for poly bags which thick and hard to seal.
- Bottom sealer auto ascending device which can prevent the material been overheated or broken when machine stopped.
- Equipped with notch puncher and hanging slot puncher each one set.
- Micro Computer Control System: Auto counting, accumulative recording, auto-stop function for photocell ineffective, skip seal, etc.

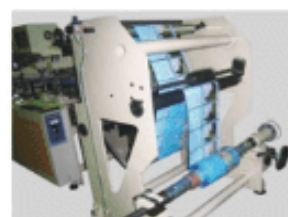
FSC-303-1

FK/FSC-350

Material width (mm)	160-500	60-720
Mechanical speed (bags/min.)	30-130	
Material diameter (mm)	500	450
Bag length (mm)	50-250	50-400
Bag width (mm)	80-250	30-350

FK/FSC-350

Economical Center Sealing Bag/
Three Side Seal Bag Making Machine



- Designed for producing light duty pouches, by its simplified structure and shortest web path, most suitable for thin laminated film, co-extrusion film or heat-sealable BOPP material.
- With different options can produce various type of bags such as center-sealed bag, center-sealed with gusset bag, four-side-sealed bag, two-side-sealed bag, three-side-sealed bag.
- Horizontal unwind stand and 3' swing-out type air shaft with web guiding device (option).

- Equipped with gusset and forming device, each one set of center sealing, bottom sealing and cooling section, quick changeover.
- Bottom sealer auto ascending device which can prevent the material been overheated or broken when machine stopped.
- With the use of optional folding by unwind stand gusseling device or a second add on unwind stand, three side seal bags can be easily produced, diversifying your production capabilities.
- Microcomputer control system with touch screen for operation parameter input including auto counting, accumulative recording, auto-stop function for photocell ineffective, skip-seal, etc.

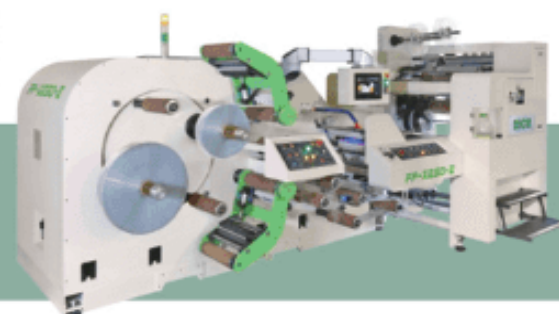


SHRINK SLEEVE SERIES

FP-X250-2



Turret Rewind High Speed Glue Seaming Machine



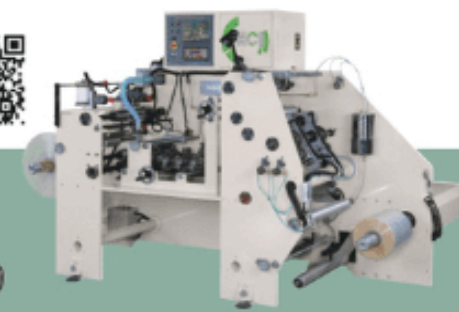
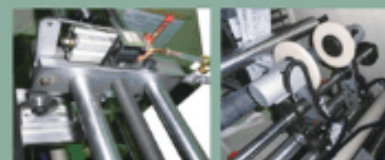
- Unwind / Rewind Tension Auto Control, equipped with loadcell and dancer roller device, which can eliminate all kinds of tension fluctuation and instantaneous changes caused from auto splicing.
- Equipped full automatic forming device, lay flat width above 50mm is free to use forming plate, adjustable sleeve forming table allows manual setting, or upgrade to automatic adjustment system.
- Using laboratory grade precision pump as solvent supply system, keep solvent quantity stable and also sync to the operation speed automatically.

- Turret Rewind equipped with two rewinding air shafts, when the finished product reached the pre-set length or diameter, the machine will automatically turret and splice, significantly reduce the machine stops and improve production efficiency.
- Seaming & Ducting Two-In-One: FP-X series seamer can be equipped with ultrasonic lay flat width detection, and solvent detection feature, both can be set alert or automatic shutdown. (option)

FP-250



High Speed Glue Sealing Machine



- Cantilevered unwind 3" air shaft with heavy-duty frame to ensure high speed operation.
- Unwind web guiding system provides the accuracy shrink sleeve seaming position, optional rewind oscillation device can oscillate the seaming area on rewinding.
- Equipped loadcell type tension controller to assure extremely stable rewinding tension without adjustment when speed and diameter varied.
- Puzzle type forming plates can be combined for producing any width over 50mm sleeves, which greatly bring down the tooling costs in production.

- Both Wheel type (on unwind before forming) and Felt type (on machine after forming) glue applicator are equipped for matching different characters of shrink film and adhesive.
- Glue flow adjusting system: The flow of glue is automatically match up with the machine speed varies.
- PLC with HMI control system, operation parameters input via touch screen, unwind / rewind tension auto control, auto stop on pre-set length.
- In-line ultrasonic sleeve width measuring device (option) to detect the sleeve width can check the lay-flat width right after seaming process in order to reduce the waste.
- In-line solvent detection device (option) to alert operator for abnormal gluing.

FK | FK PVC



Center Sealing/Glue Sealing Machine



- This machine is designed for the production of poly bags (center sealing) or shrink label (seaming), together with FSC series seaming/cutting machine to complete the production.
- Simplified design, easy to operate and maintain, it's the most economy entry level equipment for producing poly bags or shrink labels.
- Swing out type unwind air shaft. Single operator is required to manipulate and load the parent roll, cantilevered paper core or five-claw coreless winder upon request.

- Main drive AC motor provides variable speeds to accommodate a variety of materials. Rewind TQ motor provides the stable winding tension.
- FK series equipped with 2 set of thermal controller for pre-heating and sealing blade, pressed by embossing wheel for continuous sealing to have perfect sealing.
- FK PVC series equipped with glue feeding adj., magnet valve and flow quantity regulator to control the glue and blower for drying the solvent faster also increasing the production speed.
- Various options such as stroboscope, continuous perforation and rewind oscillation, etc. are available.

FSC-201



High Speed Cutting Machine



- This cutting machine is suited for perforating and cutting operations for various shrink labels or electronic material and optical film.
- Replaceable unwind shaft is suited for five-claw coreless and 3" paper core.
- The AC motor driven unwind dancer roller unit for auto speed varied and assures that the most stable web feeding even under high speed cutting machine operation.
- The cutting length is accurately controlled by servo motor incorporated with a German made photo cell sensor for greatly upgrading the production speed.

- Equipped with perforating device which can easily adjust the pressure and position.
- Various cutting edge for flat label and special jaw for cap seal are available, together with conveyor can set the accumulation stocking and moving distance.
- Micro Computer Control System with complete operation functions like auto counting, accumulative recording, auto-stop function for photocell ineffective, etc.
- Optional continuous perforation and products rewinding device are available for machine function expanded.

FP-X250-2 FP-250 FK | FK PVC FSC-201

Material width (mm)	110-520	110-520	60-520	30-200
Mechanical speed (m/min.)	0-400	0-300	0-60 (PVC 0-150)	0-35(30-350 pcs./min.)
Max. material diameter (mm)	800	500	450	700
Sleeve width (mm)	55-250	55-250	25-250	30-200
Max. rewind diameter (mm)	600	700		300 (option)
Paper core inner diameter (mm)	76 / 3" or on request			

RELATED EQUIPMENT

FSC-G

Rigid Film Flatten & Sheeting Machine



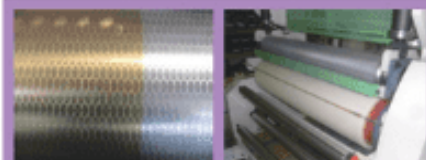
- Designed to flatten and slice various kinds of plastic and paper. Maximum thickness of materials can reach 2mm.
- Equipped with 3 heating drums, flatten films can be nearly flattened and smoothed on both side evenly.
- Employs on automatic thermo-controlled heated oil circulation system, high heating efficiency with uniform temperature distribution.
- Numerically controlled stepping motor provides very accurate positioning and cutting, and reduces errors to a minimum.

- The cutter is hydraulically controlled without further adjustment for cutting thick and thin materials. Durable blade provides clean and long lasting cutting performance.
- Operation panel with touch screen for operation parameter input including cutting length, speed, auto counting, accumulative recutting, auto-stop function for photocell ineffective, etc.

Material width (mm)	1000, 1300, 1500
Mechanical speed (pcs/min.)	10-40
Max. unwind diameter (mm)	600
Cutting Length (mm)	1-9999

FEM

Aluminum Foil & Paper Embossing Machine



- Designed for surface embossing process of aluminum-plated paper, metalized film, aluminum foil to be used on beer labels, tobacco packaging, envelopes and packaging box, etc. to upgrade outlook effect and product quality level.
- Equipped with barana roller and adjustable aluminum roller to facilitate web parallel without wrinkles.

- Upper steel embossing roller is hydraulic operated, with micro-adjustment for accurate embossing gap to have clear pattern and consistent grain depth.
- Lower backing roller can be polymer roller or wool paper roller depends on the embossing pattern.
- By using single shaft surface winding, consistent tension and edge alignment control to reduce products damage and highly improve production efficiency.

Material width (mm)	800, 1000, 1200
Max. unwind diameter (mm)	1000
Paper core inner diameter (mm)	76 / 3"
Rewinding type	Surface winding
Mechanical speed (m/min.)	0-150

TRIM WINDING SERIES



FDS-450

For pouch machine (Single winder)
Max. Speed: 100 m/min



FDS-450-2

For pouch machine (Twin winder)
Max. Speed: 100 m/min



FDS-V500

For slitter (Single winder)
Max. Speed: 500 m/min

PAPER CORE CUTTING SERIES



FPT-500

Manual type
Cutting length: 20 - 450 mm



FPT-1300

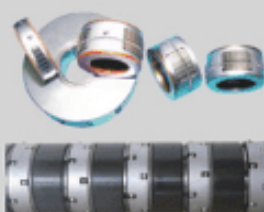
Manual type
Cutting length: 5 - 1000 mm



FPT-1400A

Semi-Auto
Cutting length: 10 - 1400 mm

HCl QUICK LOCK RING



HOT NEEDLE PERFORATION DEVICE



SHAPED POUCH DIE CUTTER

