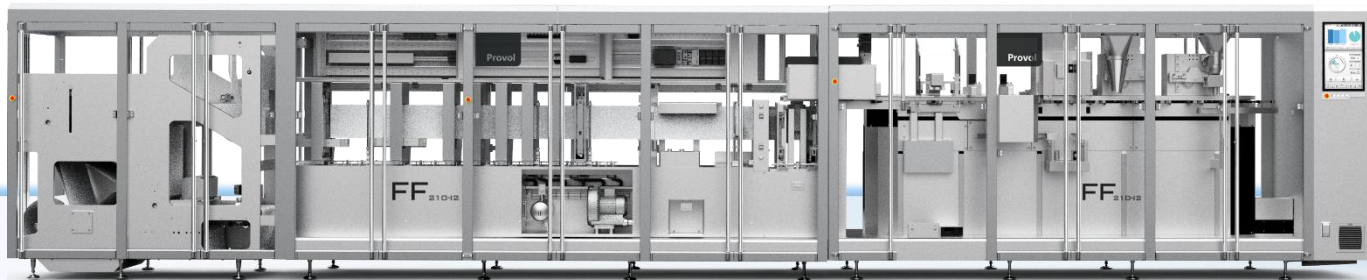


**Faster / More Stable /
More Flexible**

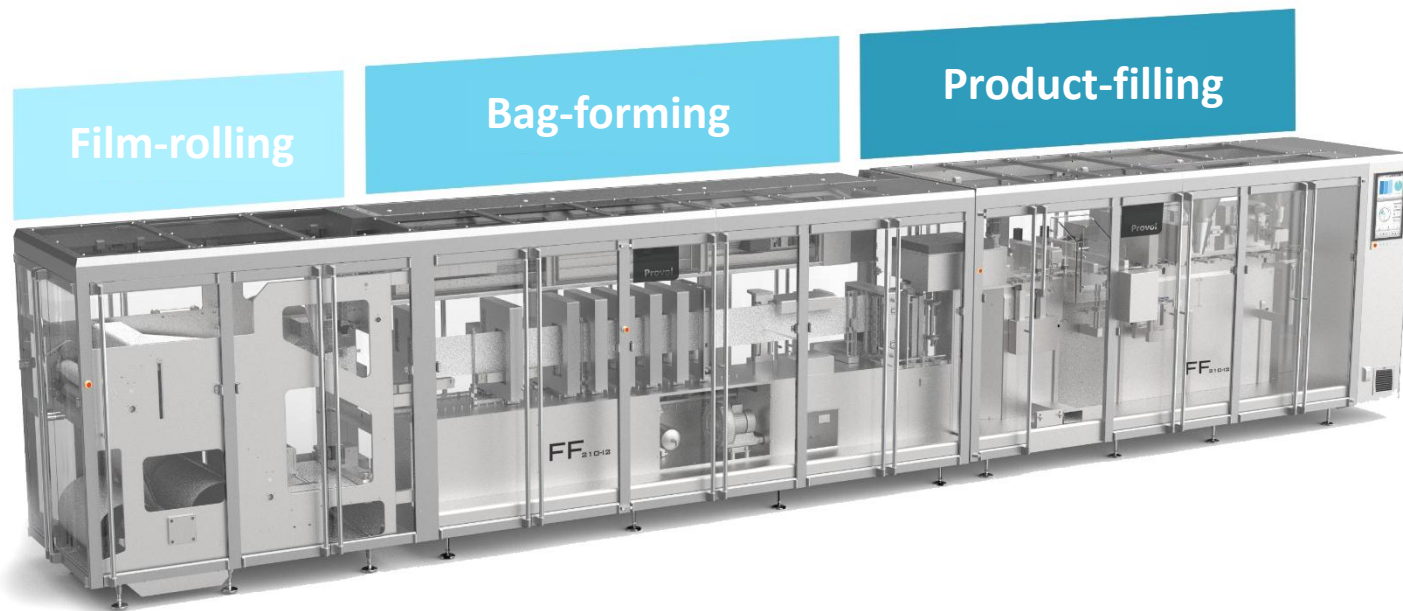


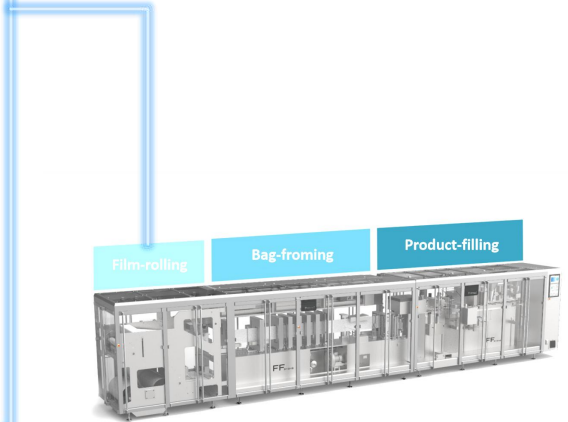
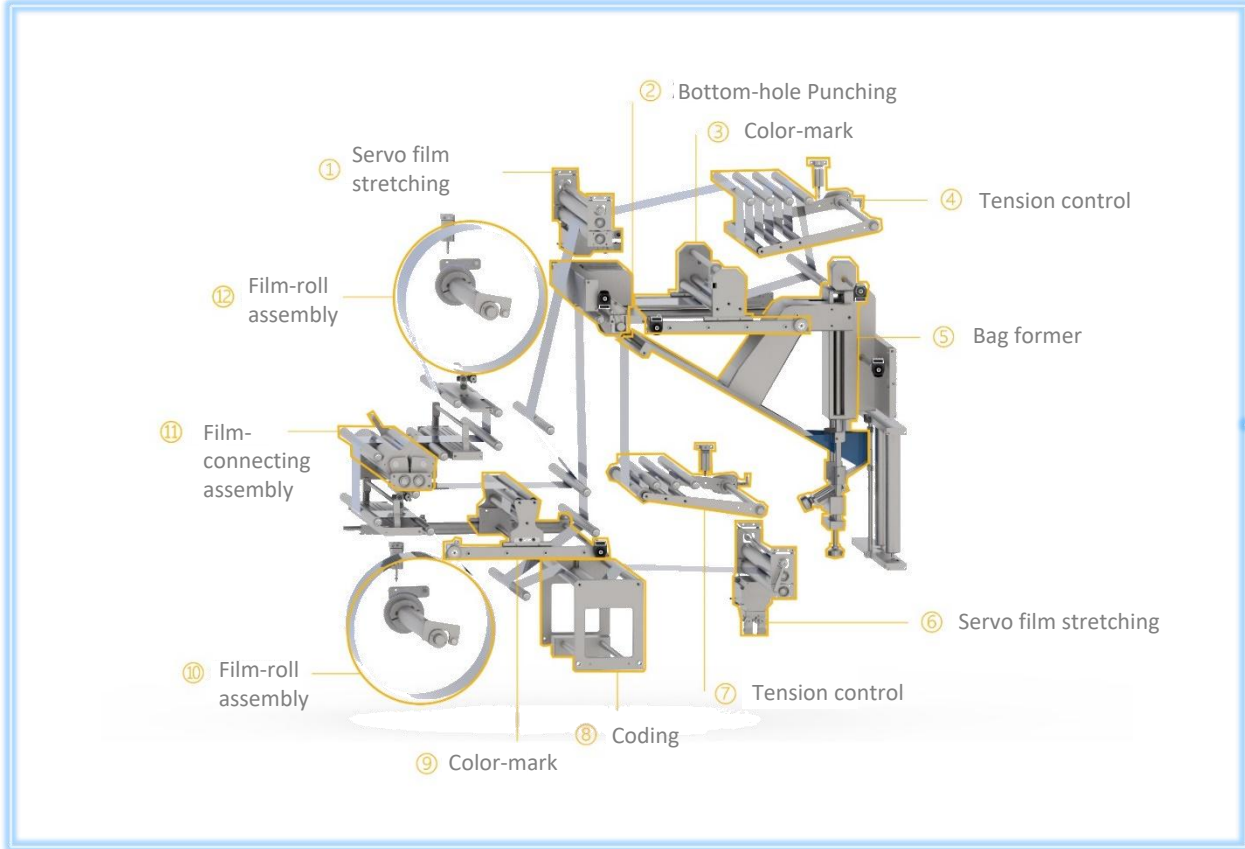
**From
Roll-film**

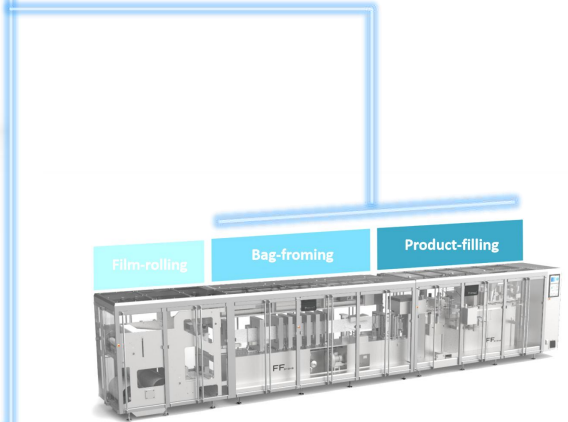
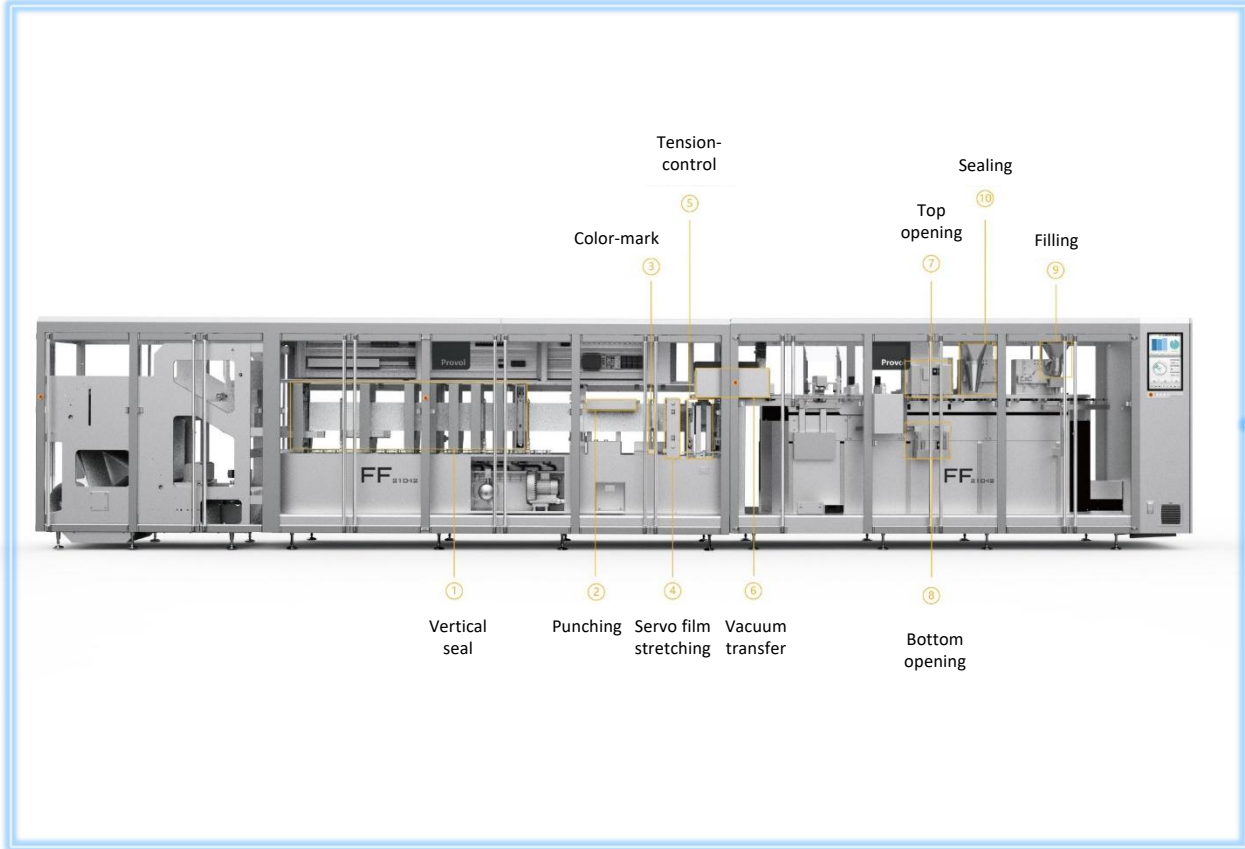
**To End-
product**


**New FFS Packaging Machine
- FF210-I2**

Provol®



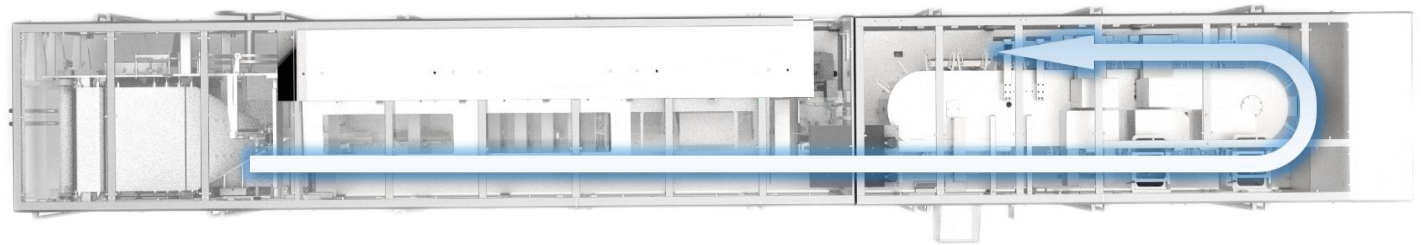




Machine Model	FF210-I2
Bag type	
Products to be filled	Granular, Powder, Particle, Seasoning, etc
Bag size (mm)	Min: 100 (W) x 140 (H)
	Max: 210 (W) x 340 (H)
Speed (bpm) (up to the filled product properties)	100-160
Machine Dimension (L x W x H) (mm)	10750X1650X2150
Max Width of film-roll	790
Max Diameter of film-roll	460
Protection grade	IP54
Noise level	≤75
Number of required operators	1
Number of working stations	10
Power	10KW

- Structure Advantage
- High Capacity
- Quick Changeover
- Easy Maintenance
- Safe Standard
- Energy Efficiency

- Cycle Chain Structure
- Functional Modular Design
- Optimized fixed-filling



Cycle chain

- **Less floor footprint**
- **More reserved functions**

Remarks: total length is 10.4m, can reserve 2-3 functional stations

**Structure
Advantage**High
CapacityQuick
ChangeoverEasy
MaintenanceSafe
StandardEnergy
Efficiency

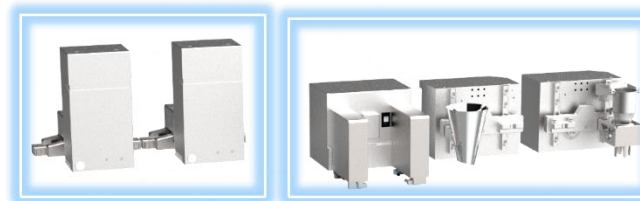
Cycle Chain Structure

Functional Modular Design

Optimized fixed-filling

- **Independent driven module**
- **Standard interface**
- **Meet diverse market need**

Remarks: punching, nitrogen filling can be as option

Modular
structure

Structure Advantage

High Capacity

Quick Changeover

Easy Maintenance

Safe Standard

Energy Efficiency

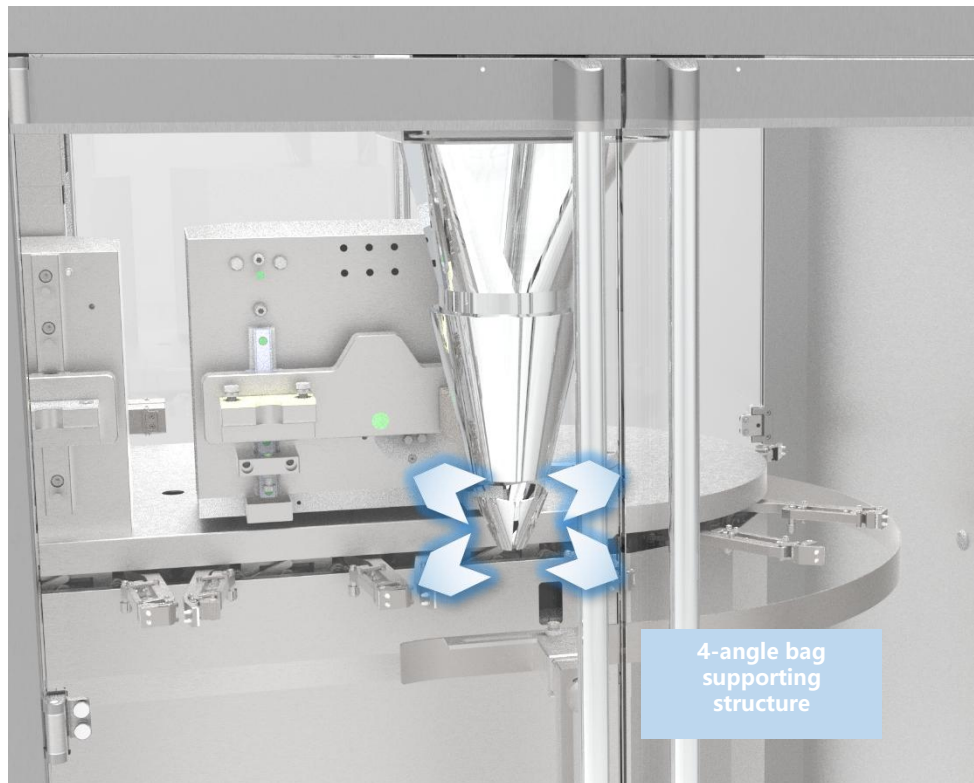
Cycle Chain Structure

Functional Modular Design

Optimized fixed-filling

- Servo filling with vibration
- Hopper with 4-angle bag supporting
- Lower feeding position
- Servo-feeding curve adjustment
- **Higher volume ratio, higher speed**

● Remark: applicable for FF210-I2

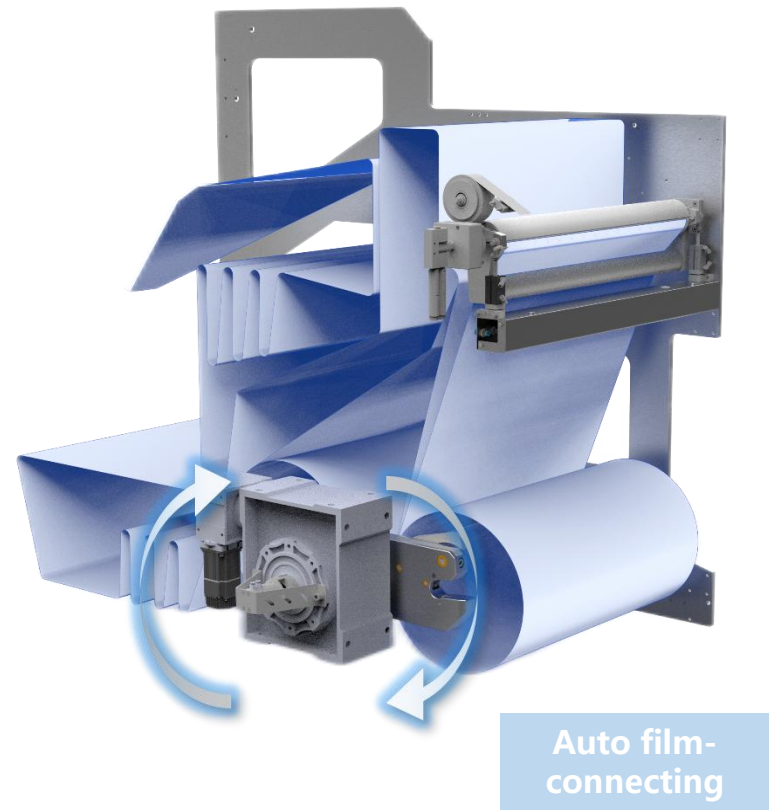


4-angle bag supporting structure

Structure Advantage
High Capacity
Quick Changeover
Easy Maintenance
Safe Standard
Energy Efficiency

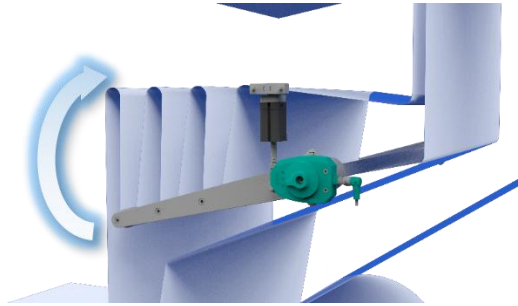
- Auto Film-Connecting
- Continuous running of roll-fim
- Independent driven heating unit
- High transmission speed

- Duplex for film-rolling
- Ultrasonic sensor and fast I/O color marking ensure auto film connecting accurately
- No down-time when film-connecting
- OEE increased up to 5%



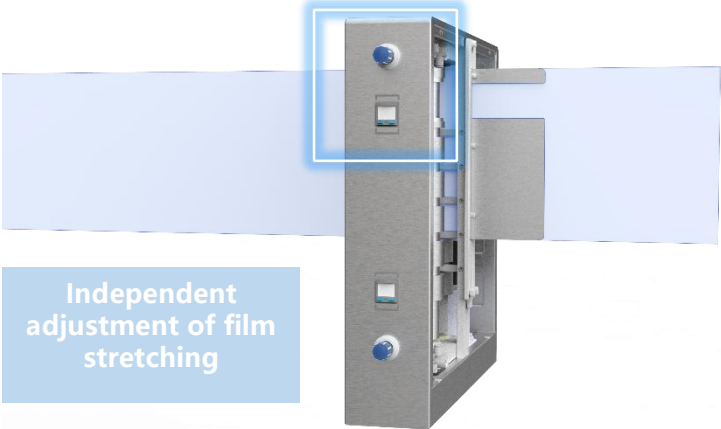
- Structure Advantage
- High Capacity**
- Quick Changeover
- Easy Maintenance
- Safe Standard
- Energy Efficiency

- Auto Film-Connecting
- Continuous running of roll-film**
- Independent driven heating unit
- High transmission speed



Constant tension control

- The synchronization of film stretching can be achieved as the real-time position of tension rod can be feedbacked thanks to the accurate angular displacement sensor and 2-axle servo.
- The film can be stretched more stable and reliable with the constant control of film tension and precise independent pressure adjustment of upper and lower glue shafts, this leads to film running continuously and evenly. The speed of film running can be higher up to 60% than non-even film running.



Independent adjustment of film stretching

Structure
Advantage

High
Capacity

Quick
Changeover

Easy
Maintenance

Safe
Standard

Energy
Efficiency

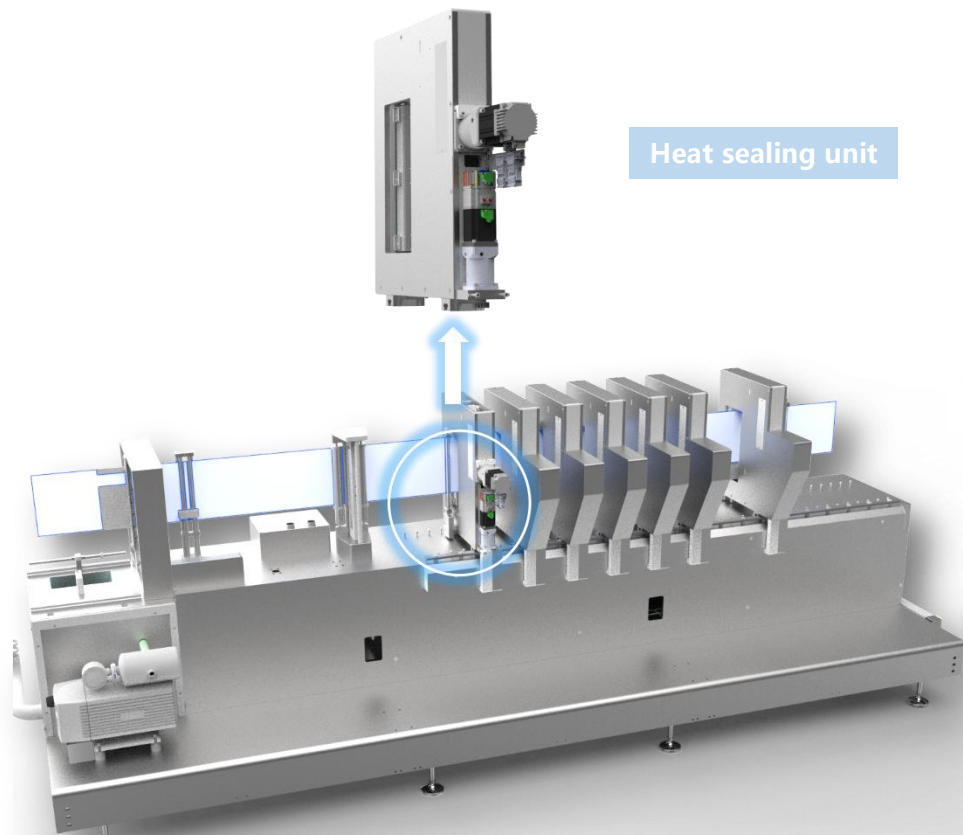
Auto Film-Connecting

Continuous running of roll-film

Independent driven heating unit

High transmission speed

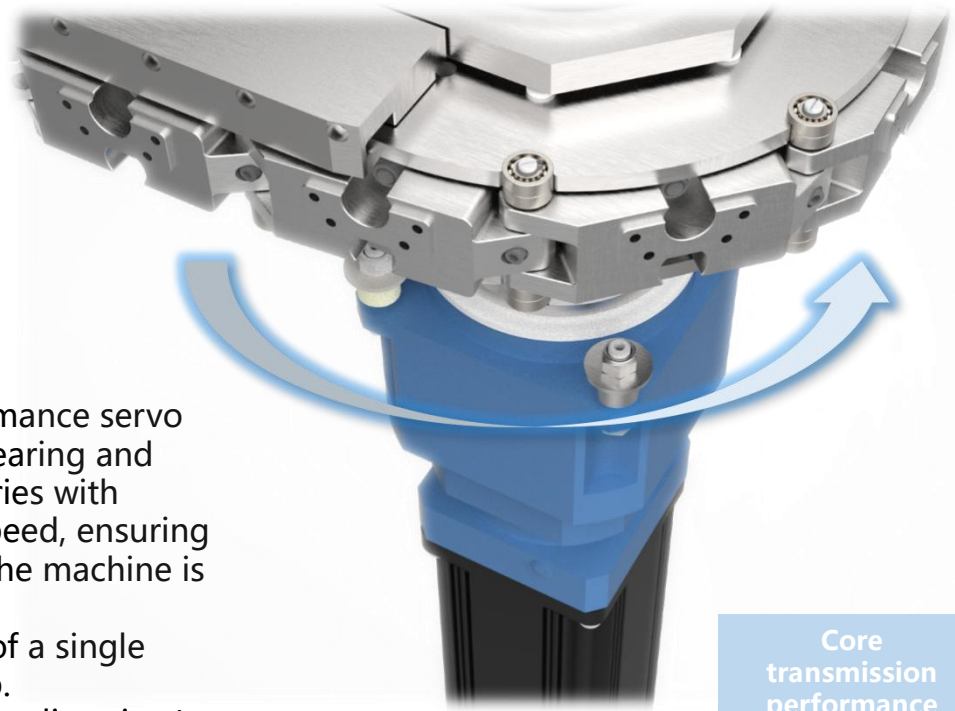
- The vertical heat sealing unit is driven by independent servo motor, ensuring faster response, more reliable performance.
- The motion of each heat sealing unit can be up to 90 cycles per minute



Structure Advantage
High Capacity
Quick Changeover
Easy Maintenance
Safe Standard
Energy Efficiency

- Auto Film-Connecting
- Continuous running of roll-film
- Independent driven heating unit
- High transmission speed**

- Equipped with high-performance servo motor, precision reducer, bearing and chain transmission accessories with higher load capacity and speed, ensuring average running speed of the machine is up to 42m/s.
- The fastest running speed of a single workstation is up to 80bmp. (Actual speed depends on feeding time)



Core transmission performance

Structure
Advantage

High
Capacity

Quick
Changeover

Easy
Maintenance

Safe
Standard

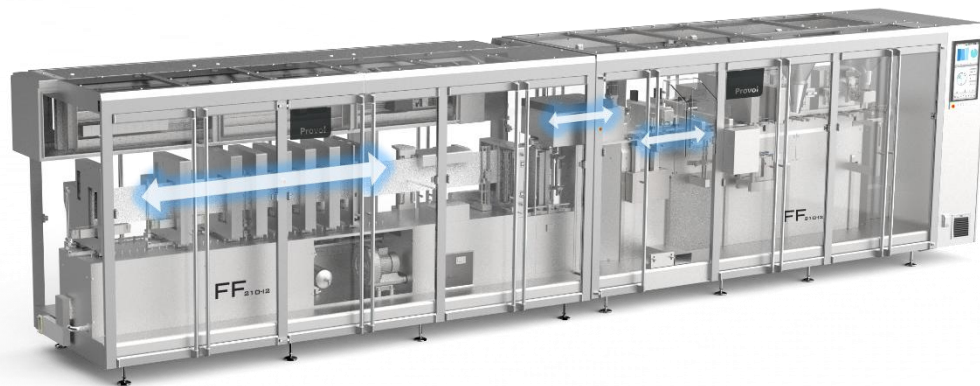
Energy
Efficiency

Auto Width Adjustment

Tool-free Height Adjustment

Recipe configured changeover

- Once the bage width is changed, usually the adjustment deviation is within $\pm 2\text{mm}$. Even the experienced operator has to conduct many trials for adjusting proper position.
- The FF210 model can realize the automatic adjustment on bag width direction, ensuring the accuracy error is within $\pm 1\text{mm}$, and the adjustment time is only 10s.



Width
adjustment

Structure
Advantage

High
Capacity

Quick
Changeover

Easy
Maintenance

Safe
Standard

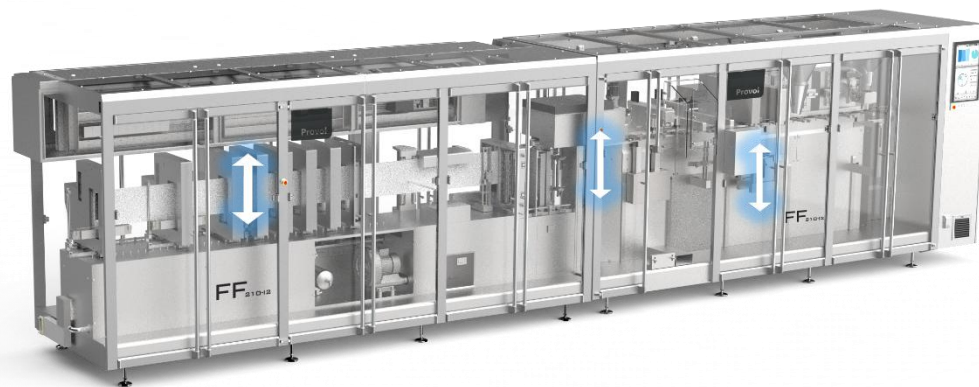
Energy
Efficiency

Auto Width Adjustment

Tool-free Height Adjustment

Recipe configured changeover

- Height adjustment does not require high accuracy (usually around $\pm 10\text{mm}$), but it needs a lot of labor effort for preparation.
- Thanks to the labor-saving mechanical structure design of FP series machine, the manual adjustment can be done by using standard tools even **without tools**.

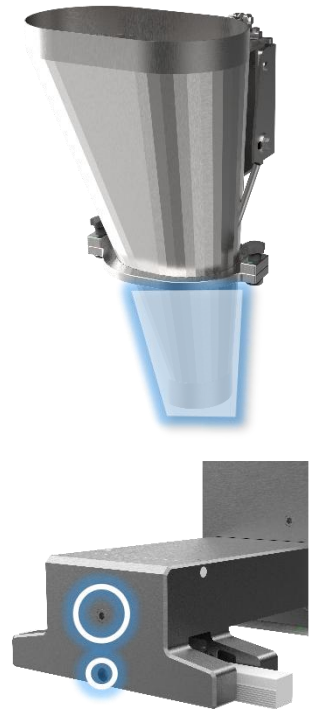


Height
adjustment

- Structure Advantage
- High Capacity
- Quick Changeover**
- Easy Maintenance
- Safe Standard
- Energy Efficiency

- Auto Width Adjustment
- Tool-free Height Adjustment
- Recipe configured changeover**

- **Recipe administration** via touch-screen is much clear for operators who could check easily all of the changeover parts according to different bag sizes and products, that make the detailed records for each changeover, which will be helpful to optimize the machine efficiency continuously.
- **Quick changeover** to different bag sizes and types can be done within a short time.



Indication of quick-changeover

Bag Type05	
Wide	0 mm
High	0 mm
Materials	BOPP/VMCPP
Features	Moisture-proof, oil-resistant, oxygen-proof, light-proof,

Manually Adjust Item Confirmation

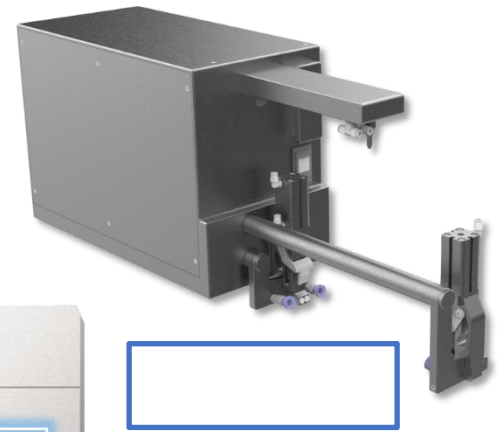
- Bottom open bag adjustment
- Give the bag to adjust
- Give the bag wheel adjust
- Bag Seal adjust
- Up open bag adjustment
- Feed Funnel adjustment

- Structure Advantage
- High Capacity
- Quick Changeover
- Easy Maintenance
- Safe Standard
- Energy Efficiency

Quick spot-check

Efficient cleaning

- Before the machine starts up each time, it is usually necessary to check the exposed small parts and electrical instruments on the packing machine, in order to avoid the abnormal machine performance and the risk of foreign bodies in the well packed products.
- FF210 series packaging machines adopt the simple appearance design, the power distribution cabinet and key electrical components are visible, so that the status of the machine is clear at a glance.



Key components are visible

Structure
Advantage

High
Capacity

Quick
Changeover

Easy
Maintenance

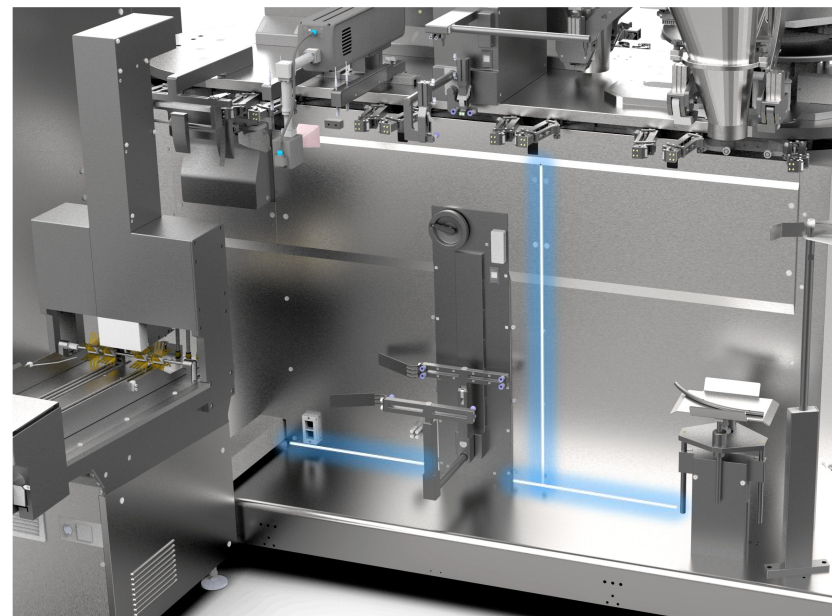
Safe
Standard

Energy
Efficiency

Quick spot-check

Efficient cleaning

- There is a possibility that the primary packaging machine will contact with the products, so it is necessary to avoid the **hygiene dead angle**, which requires a higher hygienic grade.
- FP series packaging machine is designed referring to **Provol hygienic design standard**. The driving part of the overall machine has high sealing performance, the mechanical structure has no hygienic dead angle. The air tube and electric wire are not exposed, so it is convenient to wipe and clean by the operators. As for those parts need to be removed to clean and replace, such as cloth coated on the heating jaws, conveyor belt etc., no tools are needed to quickly clean and replace.



Less hygiene
dead angle

Structure
Advantage

High
Capacity

Quick
Changeover

Easy
Maintenance

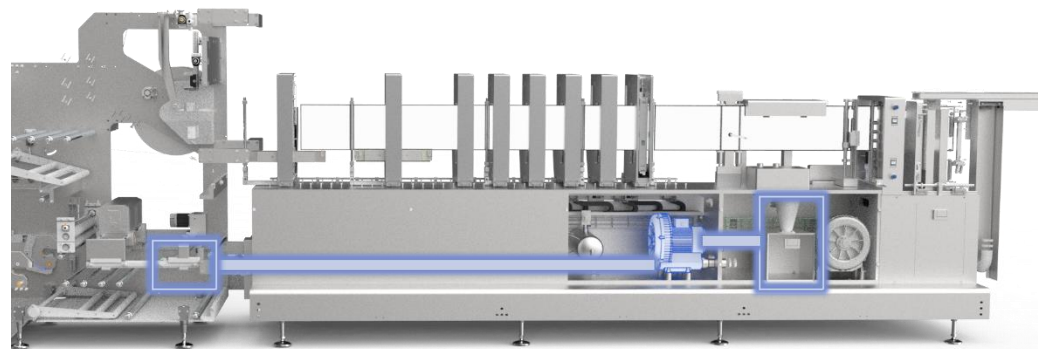
Safe
Standard

Energy
Efficiency

Quick spot-check

Efficient cleaning

- Built-in cyclone separator and high-power vacuum cleaner, forming negative pressure.
- Equipped with large-volume collector to remove the waste conveniently when downtime



Waste disposal

Structure
Advantage

High
Capacity

Quick
Changeover

Easy
Maintenance

Safe
Standard

Energy
Efficiency

- Overall machine control system is designed to meet Safety Standard as below:

EN ISO 13849-1

- Overall machine is designed to comply with the certificated requirements as below:

CE Certification Standard

