

# Horizon

FOLDING

## AFC-74 Series

Professional Folding.



# PROFESSIONAL FOLDING.

The AFC-74 series B1-format folder combines simple operation, quick changeover, high production speed, and superior fold quality.

## BENEFITS

### **SIMPLE AND EASY OPERATION**

The folder is easy and intuitive to set-up, even without a skilled operator, thanks to the intelligent automation and user-friendly design.

### **ADVANCED AUTOMATION**

A wide variety of fold patterns are automatically set by inputting the sheet size and selecting a fold pattern through the large color touchscreen.

### **SELECTABLE FEEDERS**

Two different types of feeders can be selected for various work environments: Flat Pile Feeder and Pallet Pile Feeder.

### **HIGH QUALITY**

Fold rollers are constructed with a combination of steel and soft polyurethane for superior grip and sharp, consistent folding.

### **MANAGE YOUR BINDERY WITH HORIZON'S BINDERY CONTROL SYSTEM**

The system can be enhanced with automated workflow from upstream to post-press with iCE LiNK, which uses cloud technology, Horizon's next generation bindery control system.



## TWO TYPES OF FEEDERS

### FLAT PILE FEEDER

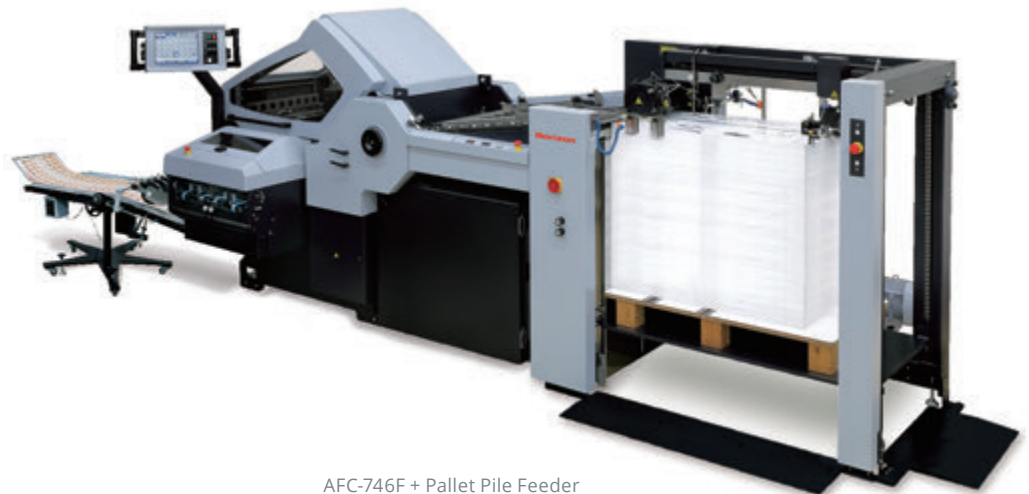
- The feed table automatically descends for sheet loading to maintain proper distance between the top of piled sheets and the feed rotor. Maximum pile height is 750 mm or 29.5".



AFC-746F + Flat Pile Feeder

### PALLET PILE FEEDER

- The pallet pile feeder accepts the piled sheets from the printing press to maximize operator convenience and to minimize production time. Maximum pile height is 1,200 mm or 47.2" (pallet included).



AFC-746F + Pallet Pile Feeder

# KEY FEATURES.

Exclusive features for improved production and quality.

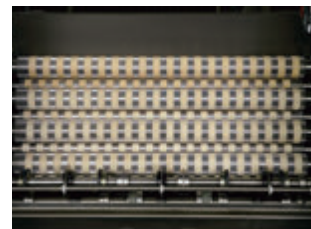
## USER-FRIENDLINESS

A large, color touchscreen control panel is icon-based for user-friendly operation. The graphical touchscreen guides the user through all set-up procedures with ease, and allows fast, easy navigation for all other system operations.



## SUPERIOR FOLD QUALITY

Superior and consistent fold quality is ensured with steel and soft-formed polyurethane combination rollers. The distance between the foam rubber rings is very narrow. So the overlap of the edges on the upper and lower fold rollers increases, providing exact folding quality.



## ADVANCED AUTOMATION

Each section is set automatically by inputting the sheet size and fold pattern through the touchscreen. Accurate stepper motors allow automated fine-adjustment in increments of 0.1 mm. Thanks to this automation, even an inexperienced operator can perform high-quality folding.



## PRECISE ADJUSTMENT FOR KNIFE STOPPER

The knife stopper can be fine-tuned in the range of  $\pm 0.5$  mm.



746F

Roller gap setting can be done automatically by simply inputting the single sheet into the caliper.



## AUTOMATED SET-UP FOLD PATTERNS

A wide variety of fold patterns can be set up automatically by selecting the icons on the touch screen. Non-standard fold patterns can also be set up automatically by inputting the setup size for each fold.

<p><b>746F</b> <b>746S</b> <b>20 patterns</b></p>							
	Single Fold	Short Fold	Gate Fold	Accordion Fold	Zigzag Fold (4 panel)	Zigzag Fold (5 panel)	Zigzag Fold (6 panel)
<p><b>744S</b> <b>15 patterns</b></p>							
	Zigzag Fold (7 panel) *2	Letter Fold	Round Parallel Fold (4 panel)	Double Parallel Fold	8-page Cross Fold	12-page Cross Fold	12-page Cross Fold
<p>*1 Some icons may not be displayed depending on the model. *2 This folding pattern cannot be performed on the AFC-744S. *3 Optional buckle below knife is required.</p>							
	16-page Cross Fold	16-page Cross Fold	16-page Cross Fold	24-page Cross Fold *3	32-page Cross Fold *3	DM Fold (Letter) *3	DM Fold (Accordion) *3



## EXCLUSIVE FUNCTIONS FOR THE AFC-746F.

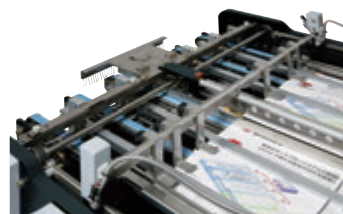
### Registration Mark Input Screen

When folding 8-page or 16-page signatures, it is possible to perform all fine adjustments by simply inputting the position of the registration mark on the screen.



### Power Stop System

Delivery belts run slower when a sheet is coming to the knife stopper to prevent knife folding skew and damage to the sheet.



### Automatic Perforation Shaft Extraction

The perforation shaft can be automatically removed for easier replacement of perforation cutter/slitter.



### Ejecting Function

Ejecting function is placed at the 1st and 2nd knife fold stopper to allow folding quality checks during job setting and operation.



AUTOMATED SETUPS				
Feeder Section	Suction Head	746F		Suction head moves to feeding position according to the sheet width.
	Feed Table Guide	746F	746S 744S	Feed table guide moves to proper loading position according to the sheet width.
Transport Section	Side Lay Guide	746F	746S 744S	Side lay guide moves to proper position according to the sheet width.
	Side Edge Guide	746F		Side Edge Guide moves to proper position according to the sheet width.
Fold Section	Roller Gap for 1st through 7th Rollers (Parallel Fold Roller) (14 sections)	746F		Roller gap sets up automatically according to the sheet thickness and fold pattern.
	Roller Gap for 8th Roller (Perforation Rollers) (2 sections)	746F		Roller gap sets up automatically according to the sheet thickness and fold pattern.
	Roller Gap for 9th through 12th Rollers (below 1st Knife) (8 sections)	746F		Roller gap sets up automatically according to the sheet thickness and fold pattern.
	Roller Gap for 13th through 14th Rollers (below 2nd Knife) (4 sections)	746F		Roller gap sets up automatically according to the sheet thickness and fold pattern.
	1st to 4th Buckle Plates	746F	746S 744S	Buckle sets up automatically according to the sheet size and fold pattern.
	5th to 6th Buckle Plates	746F	746S	Buckle sets up automatically according to the sheet size and fold pattern.
	K1 Buckle below Knife	746F		Buckle sets up automatically according to the sheet size and fold pattern.
	K2 Buckle below Knife	746F		Buckle sets up automatically according to the sheet size and fold pattern.
	1st Knife Bounce Prevention Guide	746F		Guide moves to proper position according to the sheet size and fold pattern.
	1st Knife Stopper	746F	746S 744S	Stopper sets to the proper position according to the sheet size and fold pattern.
	2nd Knife Stopper	746F	746S 744S	Stopper sets to the proper position according to the sheet size and fold pattern.
	1st Knife Stopper Side Guides (Front/Rear)	746F		Knife stopper side guides set to proper position according to the sheet width.
	2nd Knife Stopper Side Guides (Left/Right)	746F		Knife stopper side guides set to proper position according to the sheet width.

# DETAILS FOR EACH SECTION.

## 1 COLOR LCD TOUCHSCREEN

The 10.4 inch color touchscreen is icon-based for user-friendly operation. The graphical interface screen provides intuitive operation for folding setup, speed adjustments and all other fine-adjustments.



## 2 SUCTION HEAD

Innovative new suction head design provides accurate sheet separation and pick-up. Blowing air volume and height of the suction head can be adjusted according to a sheet condition.



### FEEDER EQUIPPED WITH THE SIDE BLOWING AIR

746F

Flat Pile Feeder  
Pallet Pile Feeder

746S 744S

Flat Pile Feeder  
Pallet Pile Feeder



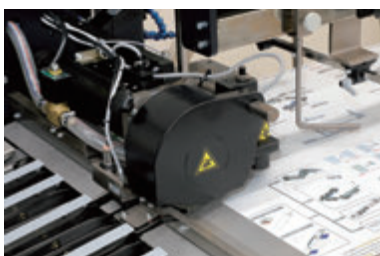
(The shape is different from the photo shown above.)

## 3 FEED ROTOR

Horizon's advanced rotary suction feed system for fast, consistent feeding of a wide range of paper stocks.

746F

Depending on the kind of the sheet, ultrasonic or photo electric detection can be chosen to detect double feeds.



## 4 SHEET TRANSPORTATION

Newly-designed rigid side lay guide ensures stable transportation and accurate registration of a wide range of paper stocks. The side lay guide is coated with a special anti-static plating, for trouble-free operation of printed sheets, even in dry climates, when static electricity can be a problem.



## 5 BUCKLE

Buckle stopper and deflector switching can be done automatically for efficient operation. Specially-coated buckle plates minimize paper friction to maintain fold accuracy.



Pretension of the bottom lip can be adjusted to prevent waves on the tail edge of the sheet.

746F

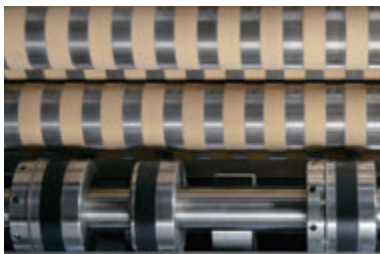
Buckle opening gap can be adjusted easily according to the paper weight and folding pattern without removing the buckle.

9



## 6 FOLD ROLLERS

The combination soft polyurethane foam rubber and steel rollers are employed for consistent folding and simple setup. Folding rollers are driven with accurate helical gears for maximum folding precision and quiet operation.



## 7 PERFORATION

Perforation, slit perforation, scoring and slitting can be performed. The perforation shaft is quick and easy to install or detach. Optional devices are available for strip trimming of multiple-up jobs, trimming the closed side of glued 8-page signatures and punch perforation.



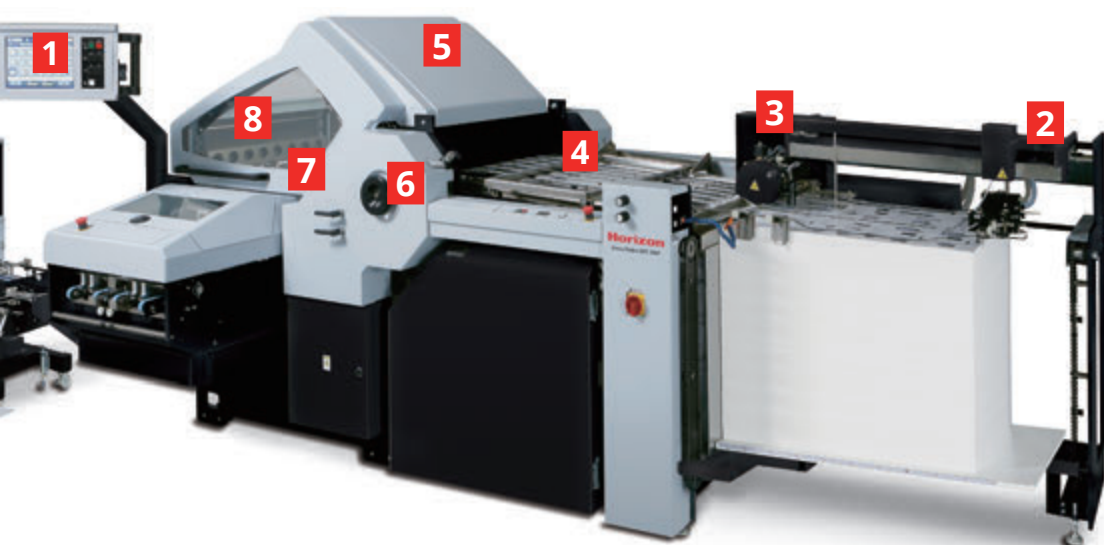
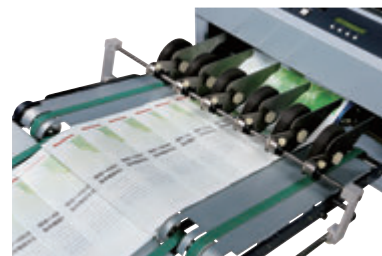
## 8 KNIFE FOLD SECTION

The knife fold system enables cross folding in a small-footprint. The servo motor controlled knife allows accurate, high speed folding. Two buckles can be installed below the knife for complicated folding. (One buckle is standard.)



## 9 DELIVERY CONVEYOR

Alternative delivery conveyors are available depending on the application requirements. The standard high capacity conveyor is easily adjusted by a hand wheel to the proper sheet delivery height. For more efficient paper handling, the press stacker PST-44/PST-44L and pile delivery PSX-56 are also available.



AFC-746F + Flat Pile Feeder

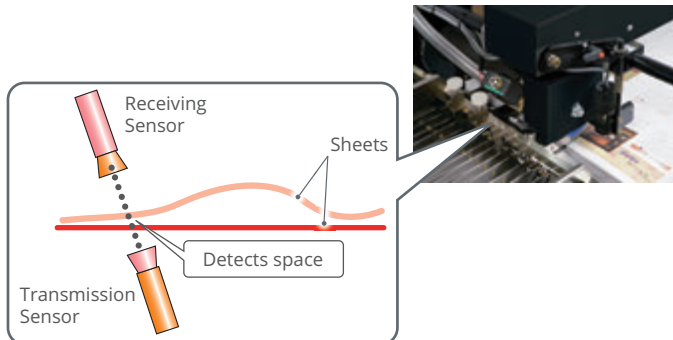


# OPTIONS.

## FEEDER SECTION

### | SD-74F/74R/74P ULTRASONIC SENSOR

- Optional ultrasonic detector is available for double feed detection. This detects space between sheets for accurate double feed detection even with a solid black printed sheet.



### | CGU-50 GLUING UNIT

- The gluing unit can produce 8-page or 12-page glued booklets and direct mail applications.



Gluing Unit Controller



Glue Gun

## FOLDING SECTION

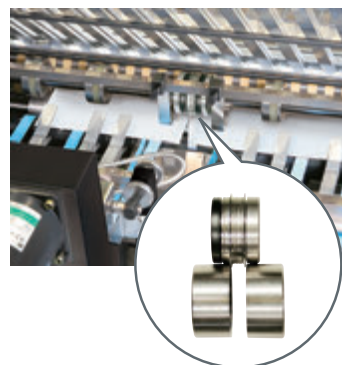
### | FP-74 (FSP-74) FRONT PERFORATION UNIT

- This unit permits perforating before folding. A hardened blade drum provides for high precision micro perforation. Skip perforation unit (FSP-74) is also available.



### | AF-ST6 STRIP TRIM DEVICE

- Strip trimming after the parallel fold section can be performed using slitters for multiple-up jobs. Stripped width can be adjusted. (3 to 10 mm at 1 mm intervals)



### | KT-ST6 STRIP TRIM UNIT BELOW 1ST KNIFE

- Strip trimming in the cross fold section can be performed using slitters for multiple-up jobs. Stripped width can be adjusted. (3 to 10 mm at 1 mm intervals)



### | KT-ET6 EDGE TRIM UNIT BELOW 1ST KNIFE

- Segmented rollers below the 1st knife are provided as standard. Simply attach the KT-ET6 to trim the open/closed side of glued signatures to complete the booklet (8 page, 12 page).





## GFB-74 GATE FOLD BUCKLE

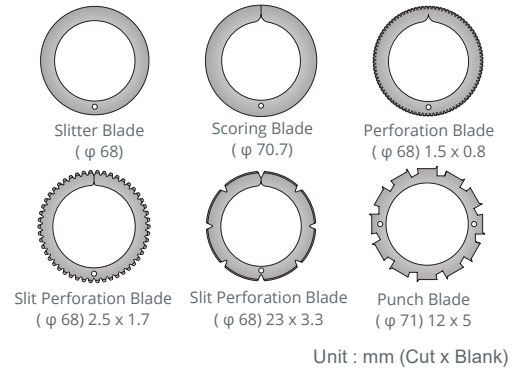
- The gate fold buckle can be set up quickly, with no special skill for precise, accurate closed-gate folding.



## BLADES

- A wide variety of optional blades are available for various applications.

Examples:



## DELIVERY SECTION

### PST-44/PST-44L PRESS STACKER

- Strong press at maximum 4 kN is applied to produce flat signature and folded pieces. First roller removes the air and second roller compresses the signature to reduce bulk. Batch separation is available to maximize productivity.



### PST-66 PRESS STACKER

- Strong press at maximum 1.2 ton is applied to produce flat signature and folded pieces. First roller removes the air and second roller compresses the signature to reduce bulk. Batch separation is available to maximize productivity.



### MKU-54T MOBILE KNIFE FOLD UNIT

- The MKU-54T is mobile knife unit equipped with the buckles below knife. It is capable of the letter fold after 8-page cross fold.



### PSX-56/R PRESS STACKER WITH PILE DELIVERY

- Stacked signatures or booklets are delivered to a comfortable height for easy packaging. Applications can be stacked 1-up, 2-up or 3-up for efficient production. Rigid, large diameter rollers apply 1.2 tons of pressure for crisp, tight and flat folds.



## FEEDER SECTION

○: Options ●: Retrofittable options \*: Ask your local dealer

NAME	MODEL	DESCRIPTION	746F	746S	744S
Ultrasonic Sensor	<b>SD-74F / SD-74R / SD-74P</b>	Detects space between sheets for accurate double feed detection even with a solid black printed sheet.	Standard	●	●
Image Checker	-	A camera scans the printed image to identify any blank or misloaded sheets.	*	*	*
Barcode Reader	-	Barcode verification and misprint detection.	*	*	*

## FOLDING SECTION

NAME	MODEL	DESCRIPTION	746F	746S	744S
Gluing Unit	<b>CGU-K74 + CGU-50</b>	Gluing gun and controller to produce glued booklet.	●	●	●
Front Perforation Unit	<b>FP-74</b>	Front perforation unit. Available only as factory option.	○	○	○
Skip Perforation Unit	<b>FSP-74</b>	Skip perforation unit. Only available as with FP-74.	*	*	*
Strip Trim Device	<b>AF-ST6</b>	Strip trimming after the parallel fold section for multiple-up jobs.	●	●	●
Edge Trim Device	<b>AF-ET6</b>	Edge trimming for the parallel fold section.	●	●	●
Punch Perforation Unit	<b>AF-PP6</b>	Punch perforation for 8- or 12-page signature for deep glue penetration when producing perfect bound book.	●	●	●
Strip Trim Unit below 1st Knife	<b>KT-ST6</b>	Strip trimming after the cross fold section for multiple-up jobs.	●	●	●
Edge Trim Unit below 1st Knife	<b>KT-ET6</b>	Enable to trim the edge of cross folded signature.	*	●	●
Punch Perforation Unit below 1st Knife	<b>KT-PP6</b>	Punch perforation for 16-page signatures with cross knife unit connection.	●	●	●
Perforation Unit below 2nd Knife	<b>MS-2K</b>	Slit perforation and scoring for 32-page signatures.	●	●	●
Gate Fold Buckle	<b>GFB-74</b>	Gate fold buckle to produce closed gate fold application.	●	●	●
Hard Urethane Roller for Parallel Fold	-	The wear-resistant hard urethane rollers. (segmented)	*	*	*
Selection	Deflector below Knife	<b>KT-D74</b> A deflector that can be installed instead of a buckle. This is required when the buckle below knife (front) KT-120A/M or the buckle below knife (rear) KT-250A/M is not installed.	●	●	●
	Buckle below Knife (Front)	<b>KT-120A (Auto)</b> <b>KT-120M (Manual)</b> Maximum folding size is 120 mm. Manual type and automated type are available. This can be used on the front or rear side.	●	●	●
	Buckle below Knife (Rear)	<b>KT-250A (Auto)</b> <b>KT-250M (Manual)</b> Maximum folding size is 250 mm. Manual type and automated type are available. This can be used on the rear side only.	●	●	●

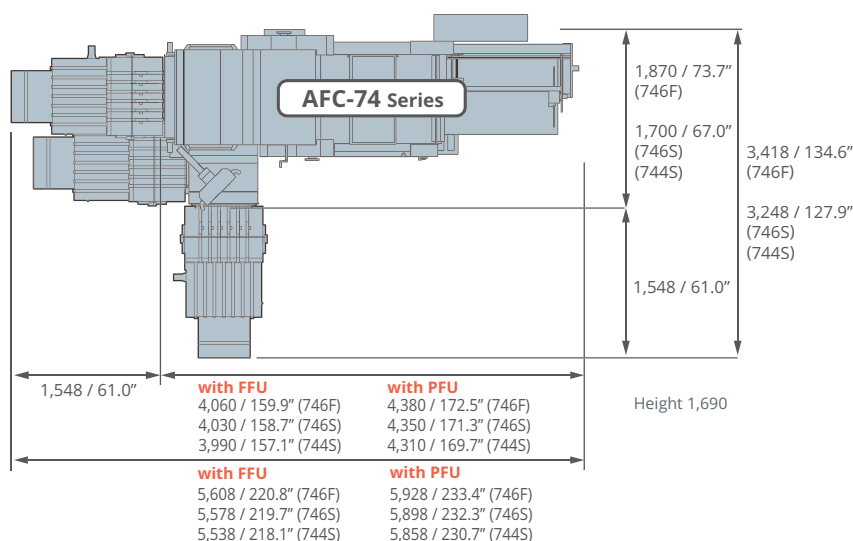
## DELIVERY SECTION

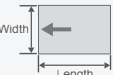
NAME	MODEL	DESCRIPTION	746F	746S	744S
Press Stacker	<b>PST-66</b>	Strong press at maximum 1.2 ton is applied to produce flat signature and folded pieces.	●	●	●
Press Stacker	<b>PST-44/PST-44L</b>	Compresses the signature to reduced bulk and tighter folds.	●	●	●
Mobile Knife Fold Unit	<b>MKU-54T</b>	Mobile knife unit with buckle under the knife.	●	●	●
Mobile Knife Fold Unit	<b>MKU-38</b>	Mobile knife unit for additional knife fold.	*	*	*
Connecting Conveyor	<b>MKU-CU</b>	Bridge conveyor between folder and MKU-38.	●	●	●
Press Stacker with Pile Delivery	<b>PSX-56</b>	Tightly pressed signatures are stacked and delivered at a comfortable height.	●	●	●
Press Stacker with Pile Delivery	<b>PSX-56R</b>	Tightly pressed signatures are stacked and delivered at a comfortable height. The PSX-56R is for opposite delivery direction.	●	●	●
Interface Unit	<b>IF-EXD</b>	This is required when connecting AFC-74 series to post-processing machines from other manufacturers that are compatible with Horizon products.	●	●	●

We have various kinds of options and peripheral equipment other than the ones listed above. Please contact your local dealer for more information.

# SPECIFICATIONS.

## Machine Dimensions. (Unit: mm / inch)



MODEL		AFC-746F	AFC-746S	AFC-744S
Machine Configuration		6KTTL (6 Buckles + 1st Fold Knife + 2 Buckles below Knife* + 2nd Fold Knife)		4KTTL (4 Buckles + 1st Fold Knife + 2 Buckles below Knife* + 2nd Fold Knife)
<div>Sheet Size (Width x Length)</div> <div></div>	Flat Pile Feeder	Max. 738 x 1,100 mm or 29.055" x 43.310"		
		Min. 210 x 210 mm or 8.270" x 8.270"		Min. 210 x 210 mm or 8.270" x 8.270" (Register guide minimum set position: W82 mm or 3.3")
	Pallet Pile Feeder	Max. 738 x 1,100 mm or 29.055" x 43.310"		Min. 210 x 297 mm or 8.270" x 11.695" (Register guide minimum set position: W82 mm or 3.3")
		Min. 210 x 297 mm or 8.270" x 11.695"		
Sheet Weight Range		Normal Paper 35 to 209 gsm Art/Coated Paper 50 to 232 gsm	35 to 220 gsm	
Buckle Fold Length	1st Buckle	60 to 560 mm or 2.4" to 22.0" (Auto)	60 to 560 mm or 2.4" to 22.0" (Auto)	60 to 560 mm or 2.4" to 22.0" (Auto)
	2nd Buckle	30 to 515 mm or 1.2" to 20.2" (Auto)	30 to 515 mm or 1.2" to 20.2" (Auto)	30 to 515 mm or 1.2" to 20.2" (Auto)
	3rd Buckle	30 to 480 mm or 1.2" to 18.8" (Auto)	30 to 480 mm or 1.2" to 18.8" (Auto)	30 to 480 mm or 1.2" to 18.8" (Auto)
	4th Buckle	30 to 480 mm or 1.2" to 18.8" (Auto)	30 to 480 mm or 1.2" to 18.8" (Auto)	30 to 330 mm or 1.2" to 12.9" (Auto)
	5th Buckle	30 to 480 mm or 1.2" to 18.8" (Auto)	30 to 480 mm or 1.2" to 18.8" (Auto)	-
	6th Buckle	30 to 330 mm or 1.2" to 12.9" (Auto)	30 to 330 mm or 1.2" to 12.9" (Auto)	-
	K1 Buckle (Below Knife [Front])	KT-120M: 55 to 120 mm or 2.2" to 4.7" (Manual)		
		KT-120A: 30 to 120 mm or 1.2" to 4.7" (Auto)		
	K2 Buckle (Below Knife [Rear])	KT-120M: 55 to 120 mm or 2.2" to 4.7" (Manual) KT-250M: 55 to 250 mm or 2.2" to 9.8" (Manual) KT-120A: 30 to 120 mm or 1.2" to 4.7" (Auto) KT-250A: 30 to 250 mm or 1.2" to 9.8" (Auto)		
Belt Speed		30 to 240 meters per minute or 99 to 787 feet per minute Knife Fold 240 meters per minute or 787 feet per minute	30 to 230 meters per minute or 99 to 754 feet per minute Knife Fold 180 meters per minute or 590 feet per minute	
Production Speed	Flat Pile Feeder Pallet Pile Feeder	Suction Head: 36,000 cycles per hour Knife: 24,000 cycles per hour		
Voltage / Frequency		Flat Pile Feeder / Pallet Pile Feeder: 3-Phase 200 / 220 V, 50 or 60 Hz, 3-phase 400 V, 50 or 60 Hz (Step down to 200V by Transformer)  AFC-746F: 3-phase 200 V, 50 or 60 Hz 3-phase 380 / 400 / 415 V, 50 or 60 Hz (Step down to 200V by Transformer)	Flat Pile Feeder / Pallet Pile Feeder: 3-phase 200 to 220 V, 50 or 60 Hz (No transformer supplied with the machine) 3-phase 380 / 400 / 415 V, 50 or 60 Hz (The transformer is supplied with the machine to step down to 200 V.)	
Machine Dimensions	Flat Pile Feeder	W4,060 x D1,870 x H1,690 mm or W159.9" x D73.7" x H66.6"	W4,030 x D1,700 x H1,690 mm or W158.7" x D67.0" x H66.6"	W3,990 x D1,700 x H1,690 mm or W157.1" x D67.0" x H66.6"
	Pallet Pile Feeder	W4,380 x D1,870 x H1,690 mm or W172.5" x D73.7" x H66.6"	W4,350 x D1,700 x H1,690 mm or W171.3" x D67.0" x H66.6"	W4,310 x D1,700 x H1,690 mm or W169.7" x D67.0" x H66.6"
	Conveyor (LCV-76L)	W1,548 x D848 x H930 mm or W61.0" x D33.4" x H36.7"		

\* 1 buckle is standard.

\* The machine design and specifications are subject to change without any notice.

\* Specifications may vary depending on the job, paper quality, environmental influences, and various other factors. Please do a test run before starting production.

**MORE AT**  
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