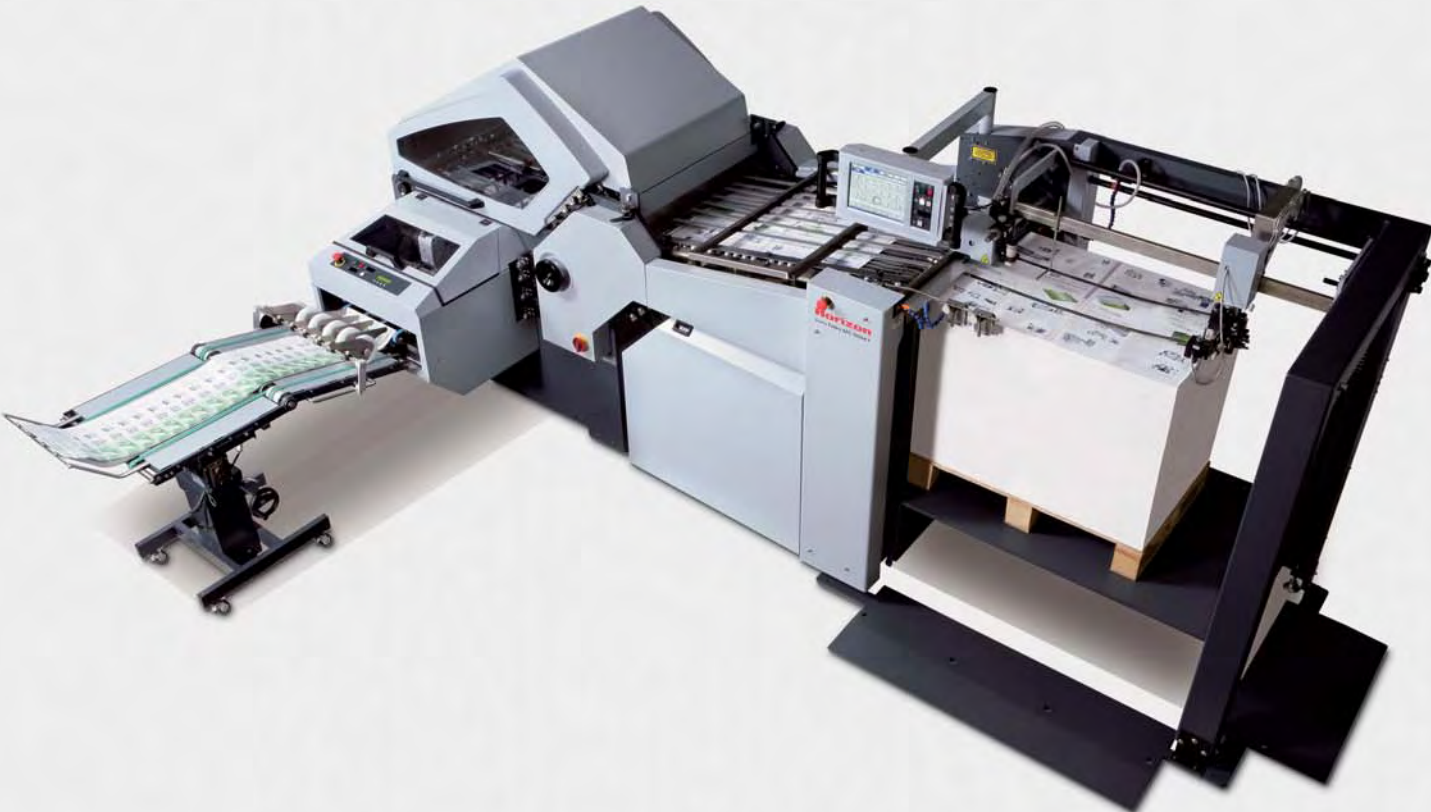


Computerized Cross Folder AFC-746S/746D

**Horizon**

# AFC-746S/746D



i2i System  
Connectable Product

## Intelligent automation for ultimate usability.

## The AFC-746S/746D adds efficiency to the folding process.

- The folder is easy and intuitive to set-up, even without a skilled operator, thanks to the intelligent automation and user-friendly design.
- 17 fold patterns are automatically set by inputting the sheet size and selecting a fold pattern through the large color touchscreen.
- Equipped with 6 buckles, 1 cross knife and 2 buckles below the knife to support a wide variety of fold patterns.
- 3 different types of feed units can be selected for various work environments: Flat Pile Feeder, Pallet Pile Feeder and Round Pile Feeder.
- High-speed production of 36,000 sheets/hr. (A4 - Parallel Fold) or 11,000 sheets/hr. (625W x 880L mm / 24.6" x 34.6" - 16-page Cross Fold).
- Fold rollers are constructed with a combination of steel and soft polyurethane for superior grip and sharp, consistent folding.
- The AFC-746S/746D can be enhanced with Horizon's unique i2i System, a JDF network flow system designed to optimize all post-press operations.



## Features

### 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.



**Fold Pattern Setup Screen**  
Setup is completed by selecting the desired fold pattern and inputting the sheet size.



**Roller Gap Adjustment Screen**  
The number of sheets to be inserted into each gap adjust lever is indicated for quick setup.



**Fine-adjustment Screen**  
The guide and buckle positions can be fine-tuned by 0.1 mm with a simple touch of the + or - button.

### Advanced Automation

13 sections are 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. Advanced automation includes setting of the buckle below the knife and fine-adjustment for the knife guide.

#### Automated Setup (13 Sections)

- Feed Table Guide
- Side Lay Guide
- 1st Buckle
- 2nd Buckle
- 3rd Buckle
- 4th Buckle
- 5th Buckle
- 6th Buckle
- K2 Buckle
- 1st Knife Guide (fine adjustment)
- 2nd Knife Guide (fine adjustment)
- 1st Knife Stopper
- 2nd Knife Stopper



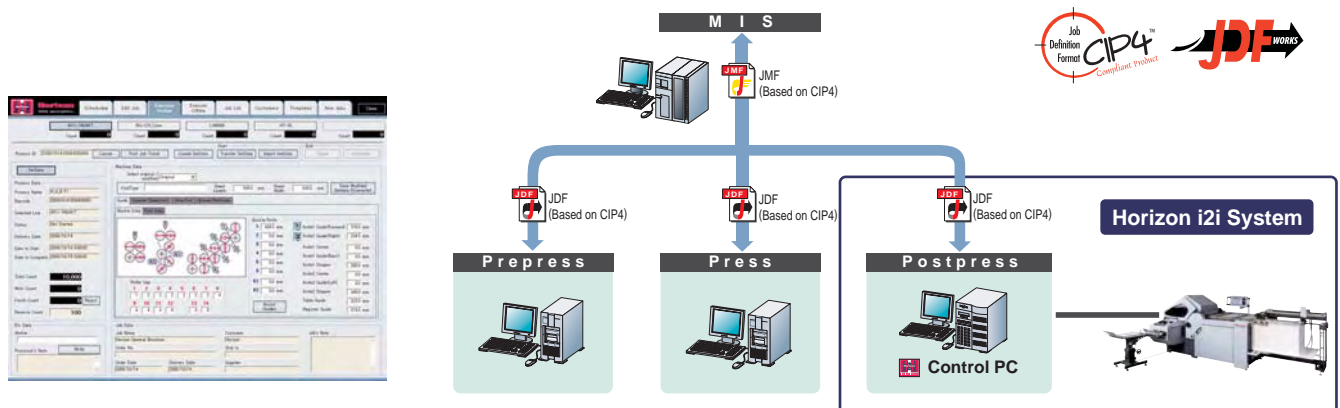
**Buckle Section**  
6 buckles are set automatically according to the input fold pattern.



**Knife Guide Fine-adjustment**  
The knife guide can be fine-tuned in the range of +/-0.5 mm.

### JDF Workflow Compatibility

Advanced and diverse print technology requires total optimization in the printing process. The AFC-746S/746D can be enhanced with Horizon's unique network flow system (i2i System) to allow postpress management or JDF workflow formulation through prepress, press and postpress.

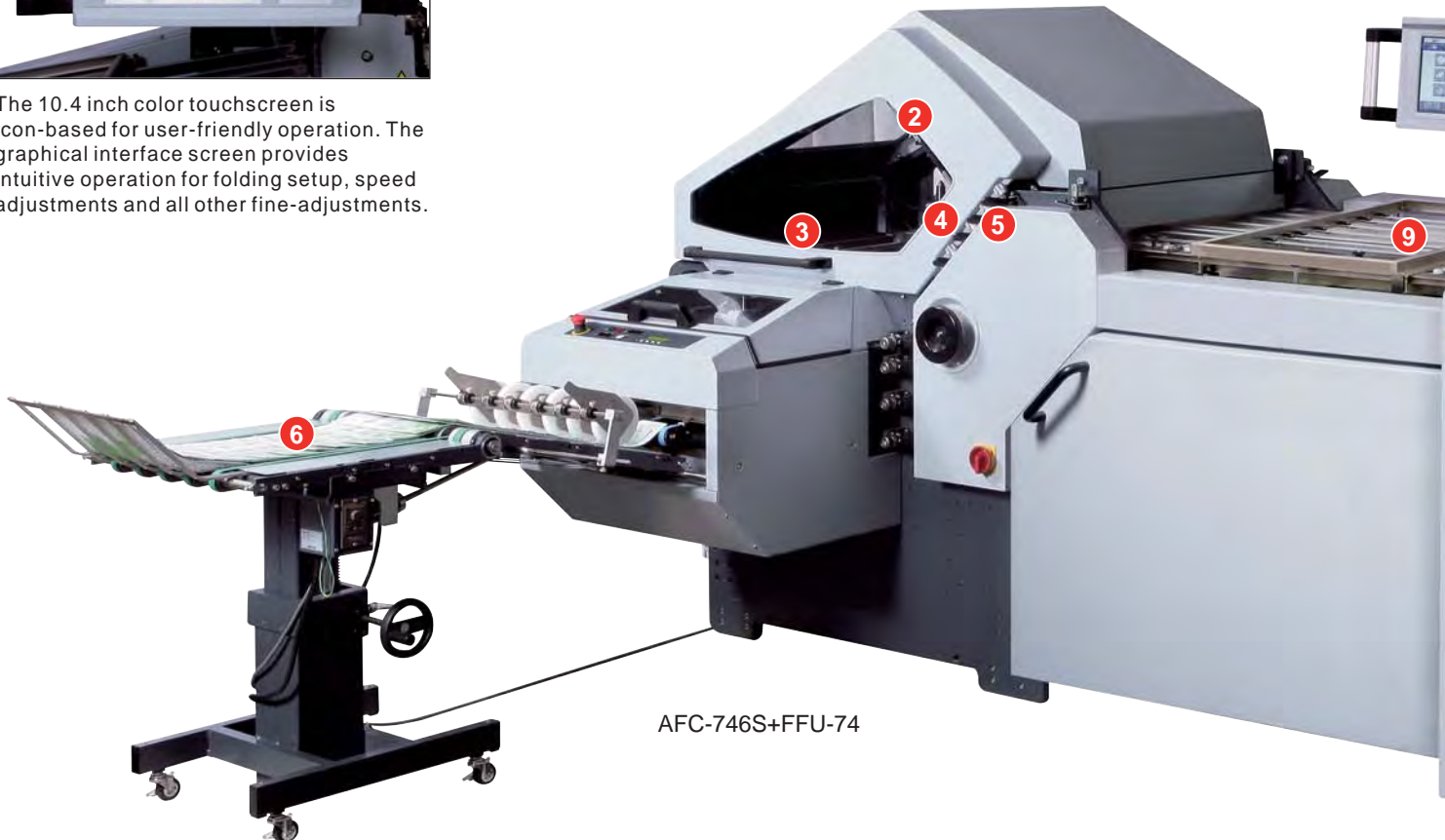


# User-friendliness and flexibility for diverse fo

## Color LCD Touchscreen 1



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.



AFC-746S+FFU-74

## Buckle Auto 2



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.

## Knife Fold Section Auto 3



The knife fold system enables cross folding in a small-footprint. The servo motor controlled knife allows accurate, high speed folding up to 24,000 sheets/hr. (A4 / 8.5" x 11" - 8-page Cross Fold) Two buckles can be installed below the knife for complicated folding (one buckle is standard).

## Perforation 4



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.

# Folding operations.

**Auto** Shows automated setup sections.



## Suction Head **7**



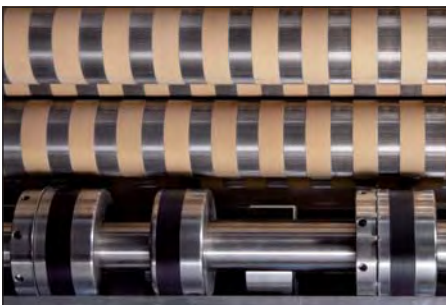
Innovative suction head provides accurate sheet separation and pick-up. Blowing air volume and height of the suction head can be adjusted according to a sheet's condition.

## Feed Rotor **8**



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

## Folding Rollers **5**



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.

## Delivery Conveyor **6**



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. An optional press stacker PST-40 is available for much tighter folding.

## Sheet Transportation **Auto 9**

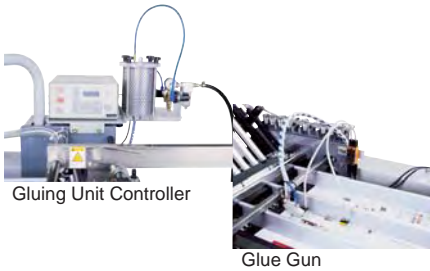


Newly-designed rigid side lay guide ensures stable transportation and accurate registration of a wide range of paper stocks. The side lay guide is coated with a special anti-static plating, for trouble-free operation of printed sheets, even in dry climates, when static electricity can be a problem.

# A Wide Range of Options Option

## ■ Gluing Unit : CGU-50

The gluing unit can produce 8-page or 12-page glued booklets.



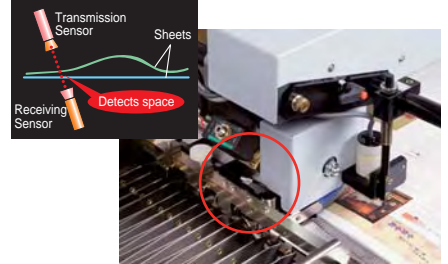
## ■ Gate Fold Buckle : GFB-74

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



## ■ Supersonic Detector : USS-74

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



## ■ Front Perforation Unit : FP-74 (FSP-74)

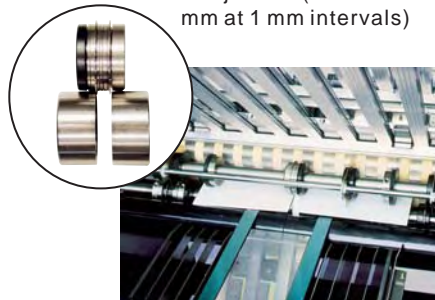
This unit permits perforating before folding. An accurate blade drum provides for high-precision micro perforation. Skip perforation unit (FSP-74) is also available.



\*The front perforation unit is a factory option.

## ■ Strip Trim Device : AF-ST6

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



## ■ Strip Trim Device below Knife : KT-ST6

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



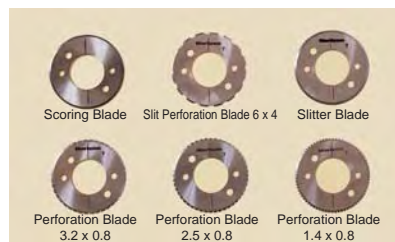
## ■ Edge Trim Device below Knife : KT-ET5

Segmented rollers below the 1st knife are provided as original equipment. Simply attach the KT-ET5 to trim the closed side of glued signatures to complete the booklet.



## ■ Blades

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



## ■ Mobile Knife Fold Unit : MKU-54

- The MKU-54 is available as the third knife unit for 32-page folds.
- The knife unit can pivot 180 degrees to allow fold-up or fold-down flexibility.



## ■ Mobile Knife Fold Unit : MKU-54T

- The MKU-54T is available as the third knife unit for 32-page folds.
- Two buckles can be attached below the knife (one buckle is standard).



## ■ Press Stacker : PST-40

- The first rollers remove the air and the second rollers powerfully compress the signatures for reduced bulk and tighter folds.
- Signatures can be offset separated individually or by group, depending on job requirements.
- A remote control provides simple adjustment of the press unit height.



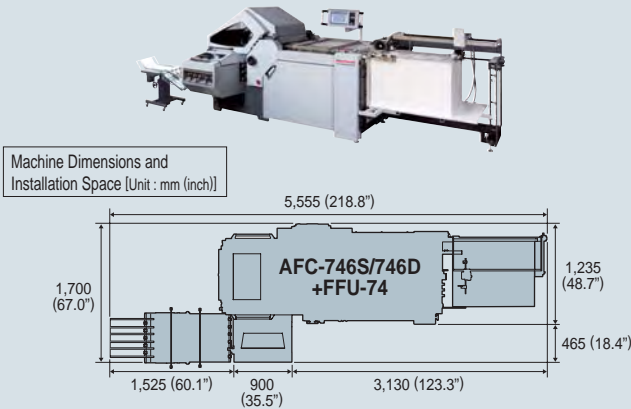
### 3 Types of Feed Units Selection

#### Flat Pile Feeder

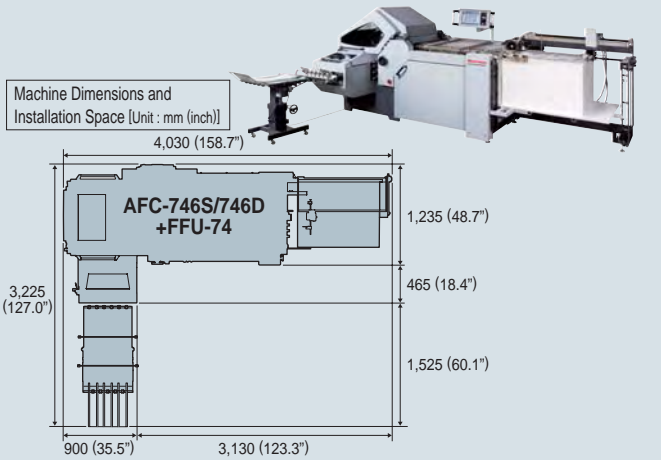
#### AFC-746S/746D+FFU-74

- 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 (29.5").

#### AFC-746S/746D+FFU-74 16-page Cross Fold



#### AFC-746S/746D+FFU-74 8-page Cross Fold

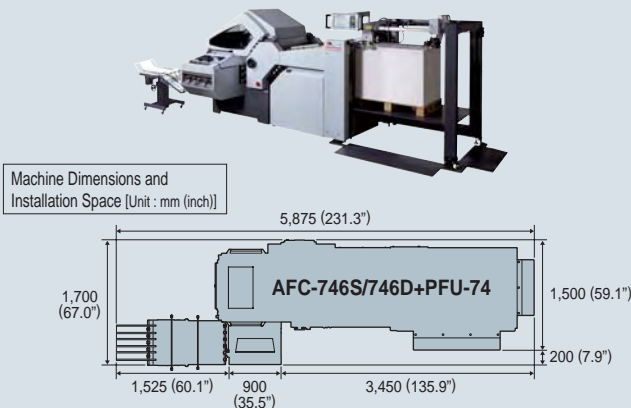


#### Pallet Pile Feeder

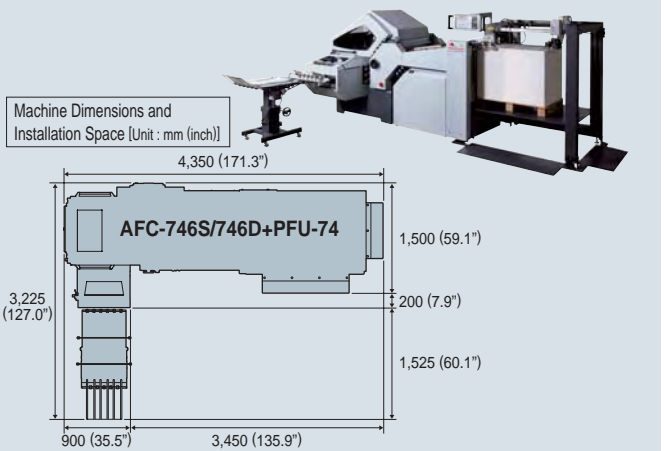
#### AFC-746S/746D+PFU-74

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

#### AFC-746S/746D+PFU-74 16-page Cross Fold



#### AFC-746S/746D+PFU-74 8-page Cross Fold

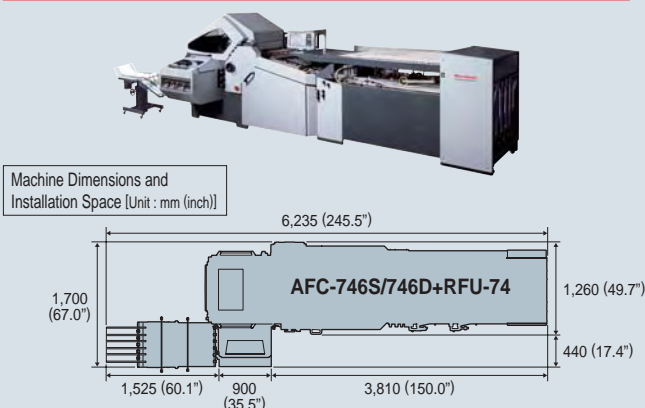


#### Round Pile Feeder

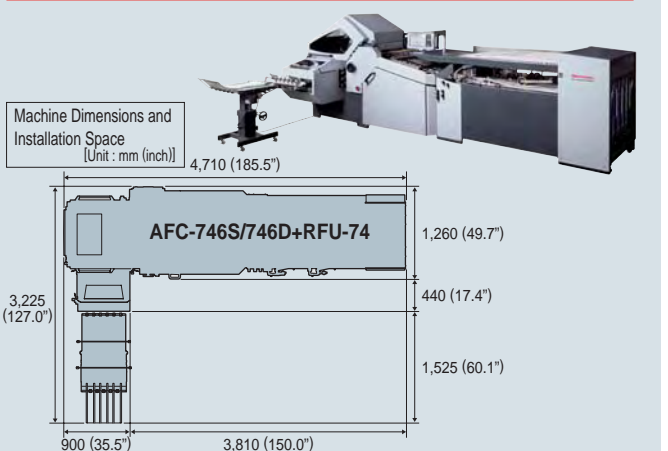
#### AFC-746S/746D+RFU-74

- The round pile feeder unit can feed a wide range of sheets including prefolded, preperforated or prepunched sheets.
- Continuous loading is available for non-stop production.

#### AFC-746S/746D+RFU-74 16-page Cross Fold



#### AFC-746S/746D+RFU-74 8-page Cross Fold



AFC-746S/746D Major Specifications

Machine Structure	6KTTL (6 Buckles + 1st Fold Knife + 2 Buckles below Knife <sup>1</sup> + 2nd Fold Knife)		Voltage / Frequency	with Flat/Pallet Pile Feeder	3-Phase 200 / 220 / 400 V, 50 / 60 Hz, 3-Phase 208 / 240 V, 60 Hz		
Max. Sheet Size	with Flat/Pallet Pile Feeder	738(W) x 1,100(L) mm (29.055" x 43.310")		with Round Pile Feeder	3-Phase 200 / 220 / 400 V, 50 / 60 Hz		
Min. Sheet Size	with Round Pile Feeder	738(W) x 1,300(L) mm (29.055" x 51.180")	Rated Current	with Flat Pile Feeder	200 V, 50 Hz, 10.0 A / 60 Hz, 11.4 A		
	with Flat Pile Feeder	210(W) x 210(L) mm (8.270" x 8.270")			208 V, 50 Hz, 11.2 A	220 V, 50 / 60 Hz, 11.0 A	
	with Pallet Pile Feeder	210(W) x 297(L) mm (8.270" x 11.695")		240 V, 60 Hz, 11.0 A	400 V, 50 Hz, 5.0 A / 60 Hz, 5.7 A		
with Round Pile Feeder	210(W) x 148(L) mm (8.270" x 5.830")	200 V, 50 Hz, 10.0 A / 60 Hz, 12.1 A		with Pallet Pile Feeder	208 V, 60 Hz, 12.0 A		
[Side Lay Guide Minimum Set Position : 82(W) mm (3.3")]		220 V, 50 Hz, 11.0 A / 60 Hz, 12.0 A			240 V, 60 Hz, 11.0 A	400 V, 50 Hz, 5.0 A / 60 Hz, 6.0 A	
Sheet Weight Range	35 to 220 gsm			Power Consumption	with Round Pile Feeder	200 V, 50 Hz, 8.4 A / 60 Hz, 10.3 A	
Buckle Fold Length	1st Buckle	55 to 560 mm (2.2" to 22.0") (Auto)				with Pallet Pile Feeder	220 V, 50 Hz, 8.7 A / 60 Hz, 10.0 A
	2nd Buckle	30 to 515 mm (1.2" to 20.2") (Auto)			400 V, 50 Hz, 4.0 A / 60 Hz, 4.5 A		
	3rd/4th/5th Buckle	30 to 480 mm (1.2" to 18.8") (Auto)			Cross Folder	200 V, 50 Hz, 5.0 A / 60 Hz, 5.3 A	
	6th Buckle	30 to 330 mm (1.2" to 12.9") (Auto)				220 V, 50 Hz, 2.9 A / 60 Hz, 3.5 A	400 V, 50 Hz, 2.9 A
	K1 Buckle	Deflector (Replaceable with K2 buckle)			with Flat Pile Feeder	200 V, 50 Hz, 2.6 kW / 60 Hz, 3.3 kW	
	K2 Buckle	30 to 250 mm (1.2" to 9.8") (Automatic Setup)		208 V, 60 Hz, 3.4 kW		220 V, 50 Hz, 2.7 kW / 60 Hz, 3.4 kW	
Knife Fold Size	1st Knife	Max. 738(W) x 550(L) mm (29.0" x 21.6")	Heat Output	with Pallet Pile Feeder	240 V, 60 Hz, 3.5 kW		
		Min. 160(W) x 100(L) mm (6.3" x 4.0")			400 V, 50 Hz, 2.6 kW / 60 Hz, 3.3 kW		
2nd Knife	Max. 550(W) x 360(L) mm (21.6" x 14.1")	with Round Pile Feeder		200 V, 50 Hz, 2.6 kW / 60 Hz, 3.5 kW			
	Min. 160(W) x 100(L) mm (6.3" x 4.0")			208 V, 60 Hz, 3.5 kW	220 V, 50 Hz, 2.7 kW / 60 Hz, 3.5 kW		
Feeding Mechanism	with Flat/Pallet Pile Feeder	Air Suction Rotor & 1 Cylinder Separator Head		Motors	with Round Pile Feeder	240 V, 60 Hz, 3.6 kW	
	with Round Pile Feeder	Air Suction Rotor & Front Blower & Side Blower (Feed interval and suction time are adjustable.)				400 V, 50 Hz, 2.6 kW / 60 Hz, 3.5 kW	
Maximum Pile Height	with Flat Pile Feeder	750 mm (29.5") [within 600 kg (1,323 lb)]			Installation Space	with Round Pile Feeder	200 V, 50 Hz, 2.3 kW / 60 Hz, 3.1 kW
	with Pallet Pile Feeder	1,200 mm (47.2") (pallet included) (Min. height of pallet is 120 mm / 4.8") [within 1,000 kg (2,205 lb)]					220 V, 50 Hz, 2.4 kW / 60 Hz, 3.1 kW
Belt Speed	50 to 230 m (54 to 250 yd./min. [Knife Fold : 180 m (196 yd.)/min.]				Noise Level	with Round Pile Feeder	400 V, 50 Hz, 2.2 kW / 60 Hz, 3.0 kW
Production Speed	36,000 sheets/hr. [A4 (8.5" x 11") Parallel Fold]						200 V, 50 Hz, 1.9 kW / 60 Hz, 2.0 kW
Standard Fold Roller	Combination of Soft Polyurethane Foam Rubber and Steel Roller		Machine Dimensions	with Round Pile Feeder	220 V, 50 Hz, 1.2 kW / 60 Hz, 1.3 kW		
Roller Gap Adjustment	Insert the instructed number of sheets into the gap adjust lever.				400 V, 50 Hz, 1.3 kW		
Slit Perforation	Parallel Fold	Cut : 10 mm (0.39") Blank : 3 mm (0.12"), Cut : 4 mm (0.16") Blank : 2.5 mm (0.10")	Machine Weight	with Round Pile Feeder	5,800 kJ (1,380 kcal)		
	Below Knife	Cut : 12 mm (0.47") Blank : 3 mm (0.12")			6,120 kJ (1,460 kcal)		
Perforation	Cut : 2.5 mm (0.10") Blank : 0.8 mm (0.03")			Installation Space	with Round Pile Feeder	5,590 kJ (1,340 kcal)	
	Min. Perforation Distance : 66 mm (2.6") in one operation / Min. Distance from Sheet Edge : 12 mm (0.48")					with Flat Pile Feeder	1.5 kW x 1, 0.4 kW x 2, 40 W x 1, 0.4 kW x 1 (Servo), 0.2 kW x 1 (Servo)
Scoring	Scoring Width : 1 mm (0.04") (Depends on sheet type)			Machine Dimensions	with Round Pile Feeder	with Pallet Pile Feeder	
Number of Holders	3 pcs + 1 pc (Accessory) (Possible to add up to 14 pcs)					with Round Pile Feeder	1.5 kW x 1, 0.75 kW x 1, 40 W x 1, 0.4 kW x 1 (Servo), 0.2 kW x 1 (Servo), 3.7 kW x 1 (Pump)
Automatic Setup	Side Lay Guide, Feed Table Guide, 1st to 6th Buckles, K2 Buckle, 1st and 2nd Knife Stoppers		Machine Dimensions	with Round Pile Feeder	with Round Pile Feeder		
Automatic Setup Accuracy	Setting Dimension : +/-1 mm (0.04") / Consistent Accuracy : +/-0.1 mm (0.004")				with Round Pile Feeder	1.5 kW x 1, 0.2 kW x 1, 40 W x 1, 0.4 kW x 1 (Servo), 0.2 kW x 1 (Servo), 3.7 kW x 1 (Pump)	
Deflectors	1st Buckle	Buckle Stopper and Swing-Arm Deflector	Machine Dimensions	with Round Pile Feeder	with Flat Pile Feeder		
	2nd to 6th Buckle	Integrated Stopper / Deflector			with Round Pile Feeder	4,320(W) x 1,700(D) x 1,690(H) mm (156.3" x 67.0" x 66.6")	
Fold Patterns	Parallel Fold, Short Fold, Open Gate Fold, Accordion Fold, Zigzag (4 panel) Fold, Zigzag (5 panel) Fold, Zigzag (6 panel) Fold, Zigzag (7 panel) Fold, Letter Fold, Double Parallel Fold, 8-page Cross Fold, 12-page Transformation Fold, 12-page Cross Fold, 16-page Cross Fold, DL Fold, 16-page Transformation Fold, 32-page Transformation Fold		Machine Dimensions	with Round Pile Feeder	with Pallet Pile Feeder		
	Job Memory	200 Jobs			with Round Pile Feeder	4,990(W) x 1,700(D) x 1,690(H) mm (184.7" x 67.0" x 66.6")	
Vacuum Pump	Flow	50 m <sup>3</sup> /hr. / 100 m <sup>3</sup> /hr. (with Round Pile Feeder)	Machine Dimensions	with Round Pile Feeder	Conveyor		
	Voltage / Frequency	3-Phase $\nabla$ 230 / Y400 V +/-10 % 50 / 60 Hz			with Flat Pile Feeder	1,280(W) x 740(D) x 1,070(H) mm (50.4" x 29.2" x 42.2")	
	Power Consumption	3.0 / 3.6 kW (50 / 60 Hz)	Temperature & Humidity	with Round Pile Feeder	5,950(W) x 3,680(D) mm (234.3" x 144.9")		
			Temperature & Humidity	with Round Pile Feeder	6,300(W) x 3,680(D) mm (248.1" x 144.9")		
				with Round Pile Feeder	6,670(W) x 3,680(D) mm (262.6" x 144.9")		
					L <sub>A</sub> peak : 89.3 dB / L <sub>eq</sub> : 86.9 dB		
				with Flat Pile Feeder	Main Body : 1,270 kg (2,800 lb), Feeder : 540 kg (1,191 lb), Conveyor : 81 kg (179 lb), Vacuum Pump : 71 kg (157 lb), Transformer : 45 kg (99 lb) [Total 2,007 kg (4,425 lb)]		
				with Pallet Pile Feeder	Main Body : 1,270 kg (2,800 lb), Feeder : 700 kg (1,544 lb), Conveyor : 81 kg (179 lb), Vacuum Pump : 71 kg (157 lb), Transformer : 45 kg (99 lb) [Total 2,167 kg (4,778 lb)]		
				with Round Pile Feeder	Main Body : 1,270 kg (2,800 lb), Feeder : 850 kg (1,874 lb), Conveyor : 81 kg (179 lb), Transformer : 45 kg (99 lb) [Total 2,246 kg (4,952 lb)]		

\*1 1 buckle is standard.

Options

- Press Stacker : PST-40
- Mobile Knife Fold Unit : MKU-54/MKU-54T
- Supersonic Detector : USS-74
- Gluing Unit Kit : CGU-K74<sup>2</sup>
- Front Perforation Unit : FP-74<sup>2</sup>
- Gate Fold Buckle : GFB-74
- Gluing Unit : CGU-50
- Buckles below Knife
- Deflector below Knife
- Image Checking System : CCD-AFC/AF
- Strip Trim Device : AF-ST6
- Strip Trim Device below Knife : KT-ST6
- Edge Trim Device : AF-ET6
- Edge Trim Device below Knife : KT-ET5
- Punch Perforation Unit : AF-PP6
- Punch Perforation Unit below 1st Knife : KT-PP6
- Punch Perforation Unit below 2nd Knife : KT-PP6-32
- Perforation Shaft below 2nd Knife : A910401-01
- Front Skip Perforation Unit : FSP-74
- Blades (Scoring/Slit Perforation/Slitter/Perforation Blade)
- i2i System
- \*2 Factory Option

Product Configuration

Product	Knife Stopper Automatic Fine-adjustment	Deflector below Knife	Front Buckle below Knife	Rear Buckle below Knife	GS	Supersonic Detector (Feeder)
AFC-746S	<input type="radio"/>	<input type="radio"/>	Option	<input type="radio"/>	X	Option
AFC-746D	<input type="radio"/>	<input type="radio"/>	Option	<input type="radio"/>	<input type="radio"/>	Option

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

17 Fold Patterns

\*3 Nonstandard fold patterns can also be set up automatically by inputting the setup size for each fold.

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