

Computerized Cross Folder AFC-74 series

**Horizon**

# AFC-74 series

AFC-746F/746S/746D/744A/744S



# Professional Folding

The AFC-74 series B1-format folder is the newest in Horizon's expanding line-up of quality-engineered folders that combines simple operation, quick changeover, high production speed, and superior fold quality.

1. The folder is easy and intuitive to set-up, even without a skilled operator, thanks to the intelligent automation and user-friendly design.
2. A wide variety of fold patterns are automatically set by inputting the sheet size and selecting a fold pattern through the large color touchscreen.
3. 3 different types of feed units can be selected for various work environments: Flat Pile Feeder, Pallet Pile Feeder and Round Pile Feeder.
4. Fold rollers are constructed with a combination of steel and soft polyurethane for superior grip and sharp, consistent folding.
5. The folder can be enhanced with JDF workflow from upstream to the postpress using pXnet bindery control system.

## 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 (29.5").



AFC-746F + FFU-74F Flat Pile Feeder

## Pallet Pile Feeder

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).



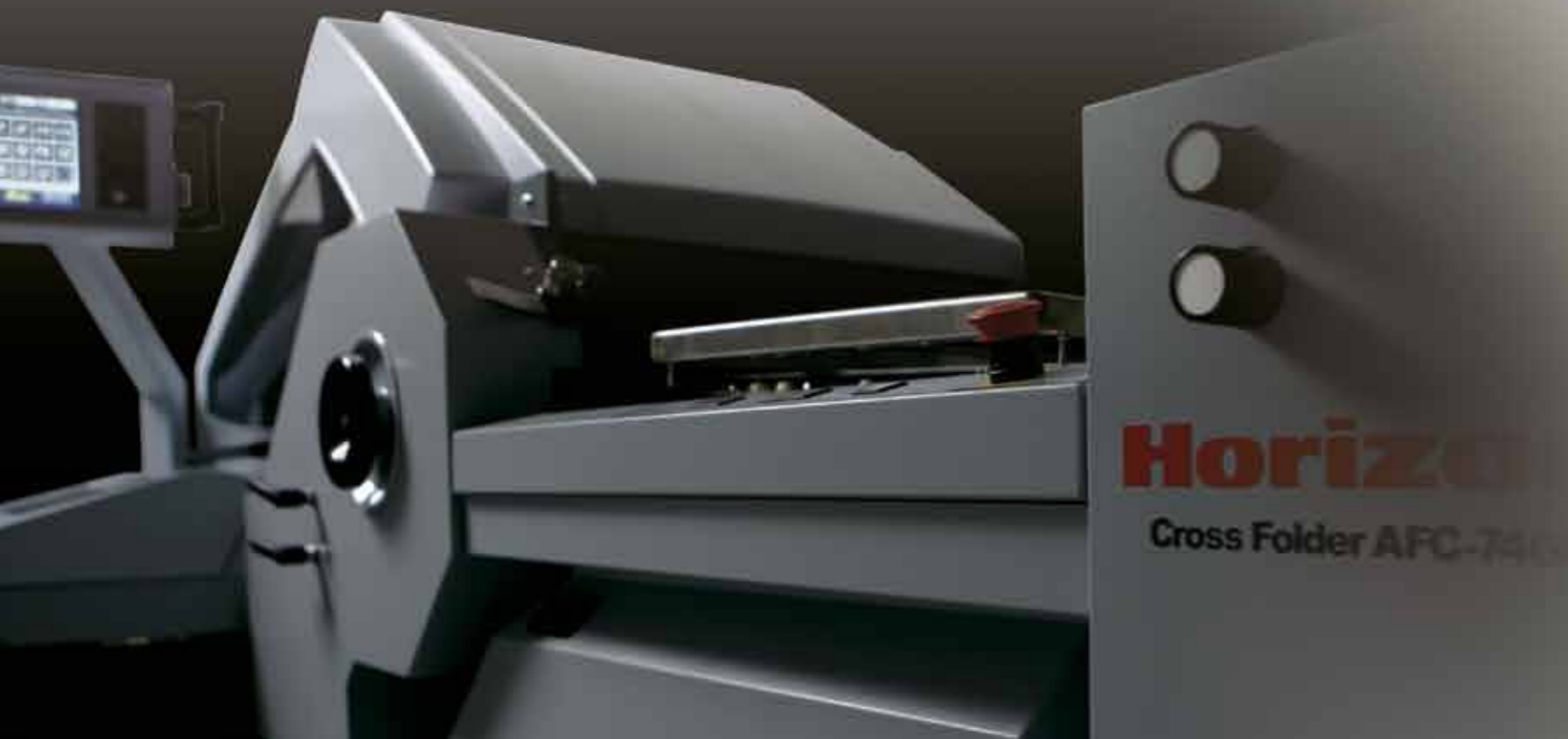
AFC-746F + PFU-74F Pallet Pile Feeder

## Round Pile Feeder

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-746F + RFU-74F Round Pile Feeder



# AFC-74 series 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.



## 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.



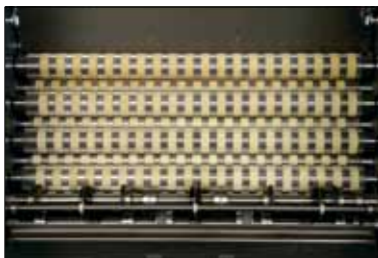
746F

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



## Superior Folding 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.



746S/746D 744S

## Knife Stopper Fine-adjustment

The knife stopper can be fine-tuned in the range of +/-0.5 mm.



## Automated Setup Sections

746F	47 sections (All sections listed below)	
746S/746D	10 sections	
744A/744S	8 sections	
• Suction Head*1		
• Feed Table Guide	746S/746D	744A/744S
• Side Lay Guide	746S/746D	744A/744S
• Side Edge Guide		
• 1st to 4th Buckles	746S/746D	744A/744S
• 5th to 6th Buckles	746S/746D	
• 1st Knife Stopper	746S/746D	744A/744S
• 2nd Knife Stopper	746S/746D	744A/744S
• 1st Knife Stopper Side Guides (Front/Rear)		
• 2nd Knife Stopper Side Guides (Left/Right)		
• 1st Knife Bounce Prevention Guide		
• K1 Buckle below Knife		
• K2 Buckle below Knife		
• Roller Gap for 1st through 7th Rollers (Parallel Fold Roller) (14 sections)		
• Roller Gap for 8th Roller (Perforation Rollers) (2 sections)		
• Roller Gap for 9th through 12th Rollers (below 1st Knife) (8 sections)		
• Roller Gap for 13th through 14th Rollers (below 2nd Knife) (4 sections)		

\*1 The suction head is not equipped with the RFU-74/RFU-74F Round Pile Feeder.

## Automated Setup Fold Patterns

746F	20 patterns (Except for the pattern marked with *2.)	
746S/746D	20 patterns (Except for the pattern marked with *3.)	
744A/744S	14 patterns (Except for the patterns marked with *3 and *4.)	

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

## A Wide Variety of Functions for 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

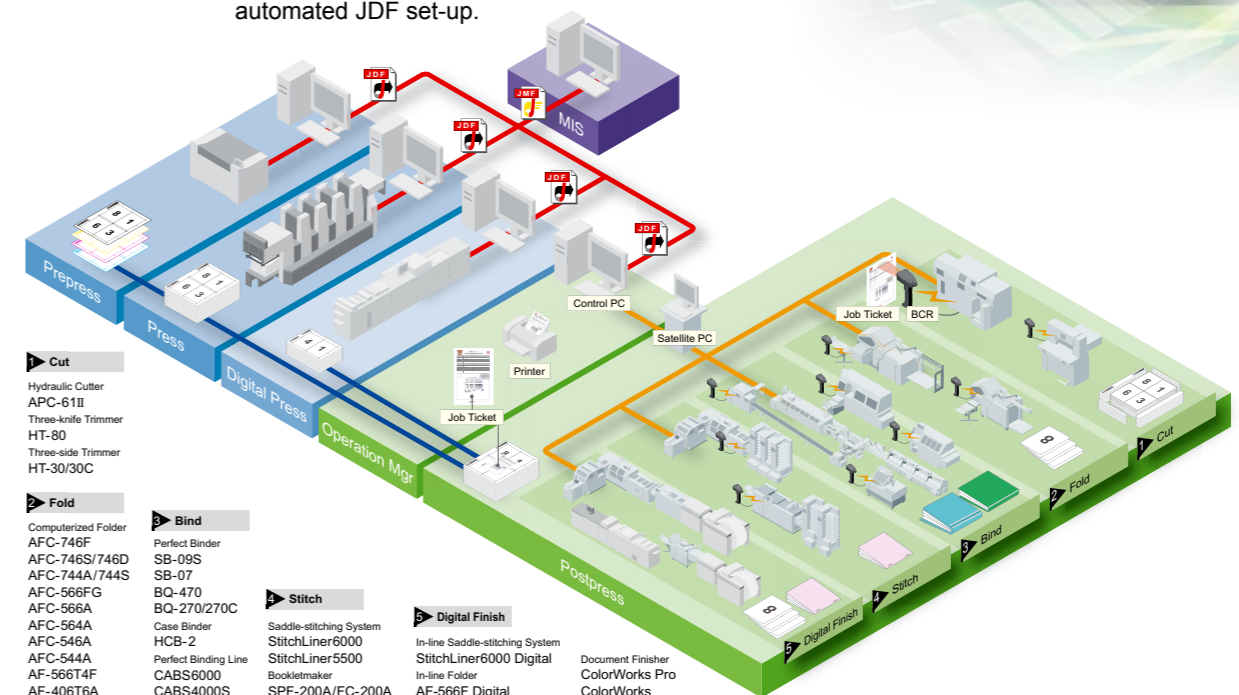
Ejecting function is placed at the 1st and 2nd knife stopper to allow folding quality checks during job setting and operation.

## pXnet System

# Manage your bindery with JDF enabled control system.



The Horizon pXnet Bindery Control System is used as a central control point to schedule work, send job data to each finisher, monitor status of finishers and collect production statistics from finishers in real-time. pXnet brings efficiency and value in high-mix/low-volume production environments where frequent job changeovers are needed. The pXnet system can also be interfaced with an existing workflow for automated JDF set-up.



- Cut**
  - Hydraulic Cutter AFC-746F
  - Three-knife Trimmer HT-80
  - Three-side Trimmer HT-30/30C

- Fold**
  - Computerized Folder AFC-746F
  - Perfect Binder AFC-746S/746D
  - AFC-744A/744S
  - AFC-566FG
  - AFC-566A
  - AFC-564A
  - AFC-546A
  - AFC-544A
  - AF-566T4F
  - AF-406T6A

- Bind**
  - Perfect Binder SB-09S
  - SB-07
  - BQ-470
  - BQ-270/270C
  - Case Binder HCB-2
  - Perfect Binding Line CABS6000
  - CABS4000S

- Stitch**
  - Saddle-stitching System StitchLiner6000
  - StitchLiner5500
  - Bookletmaker
  - SPF-200A/FC-200A

- Digital Finish**
  - In-line Saddle-stitching System StitchLiner6000 Digital
  - In-line Folder AF-566F Digital

- Document Finisher**
  - ColorWorks Pro
  - ColorWorks

# Further Details

## 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.

## 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-40 and pile delivery PSX-56 are also available.



## 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.)



## Knife Folding Speed

746F	30,000 sheets/hr. (A4 / 8.5" x 11" - 8-page Cross Fold)
746S/746D	24,000 sheets/hr. (A4 / 8.5" x 11" - 8-page Cross Fold)
744A/744S	24,000 sheets/hr. (A4 / 8.5" x 11" - 8-page Cross Fold)

## 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.



## 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.



## 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/746D 744A/744S

Flat Pile Feeder (The shape is different from the photo shown above.)  
Pallet Pile Feeder

## Feed Rotor

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

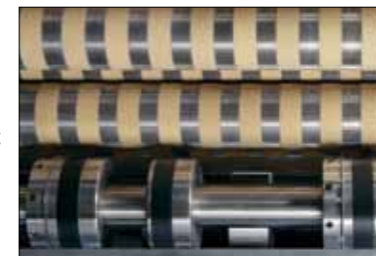


746F

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

## Folding 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.



## 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.



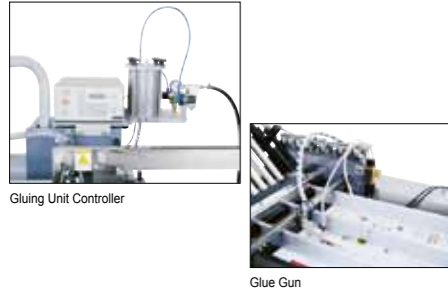
AFC-746S + FFU-74



# Optional Accessories

## Gluing Unit CGU-50

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



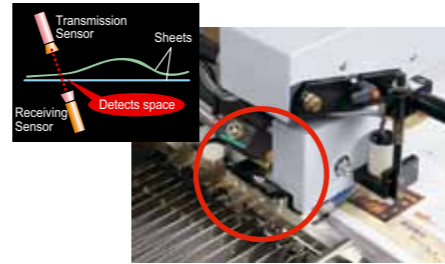
## Gate Fold Buckle GFB-74

The gate fold buckle can be set up quickly, with no special skill 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.



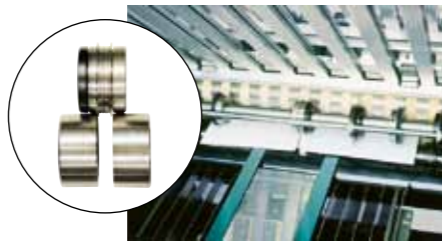
## Front Perforation Unit FP-74 (FSP-74)

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



## Strip Trim Device AF-ST6

Strip trimming after 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) (AF-ST6F is available for AFC-746F.)



## Strip Trim Device below 1st 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)



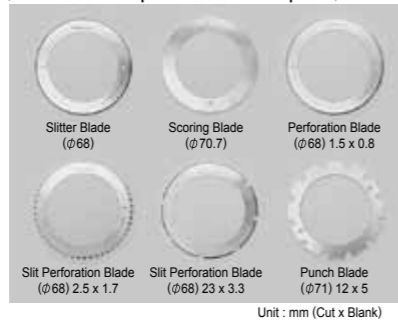
## Edge Trim Device below 1st Knife KT-ET6

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



## Blades

A wide variety of optional blades are available for various applications. (Blades in the photo are examples.)



## 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.



## Mobile Knife Fold Unit MKU-54

The MKU-54 is available as the second knife unit for a 2nd cross fold. The knife unit can pivot 180 degrees function to allow fold-up or fold-down flexibility.



## Mobile Knife Fold Unit MKU-54T

The MKU-54T is available as the second knife unit for a 2nd cross fold. Two buckles can be attached below the knife (one buckle is standard).



## Press Stacker with Pile Delivery PSX-56

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.



## Option List

### Feeder Section

Name	Model	Description	Factory Option	746F	746S	746D	744A	744S
Supersonic Detector	USS-74	Detects space between sheets for accurate double feed detection even with a solid black printed sheet.	No	Standard	Yes	Yes	Yes	Yes
Image Checking System	IC-AFC	A camera scans the printed image to identify any blank or misloaded sheets.	Yes	Yes	Yes	Yes	Yes	Yes
Barcode Reader	-	Incorporation check and misprinting detection.	No	Yes	Yes	Yes	Yes	Yes

### Folding Section

Name	Model	Description	Factory Option	746F	746S	746D	744A	744S
Gluing Unit	CGU-K74+CGU-50	Produces 8-page or 12-page glued booklets. Additional air source (CGU-50COM) is necessary.	No	Yes	Yes	Yes	Yes	Yes
Front Perforation Unit	FP-74	Permits perforating before folding.	Yes	Yes	Yes	Yes	Yes	Yes
Skip Perforation Unit	FSP-74	Skip perforation is available. Additional controller and sensor are necessary when CGU-50 is not installed.	No	Yes	Yes	Yes	Yes	Yes
Strip Trim Device	AF-ST6F	Strip trimming after the parallel fold section for multiple-up jobs.	No	Yes	No	No	No	No
	AF-ST6		No	No	Yes	Yes	Yes	Yes
Edge Trim Device	AF-ET6F	Enables to trim the closed side of glued 8-page signatures.	No	Yes	No	No	No	No
	AF-ET6		No	No	Yes	Yes	Yes	Yes
Punch Perforation Unit	AF-PP6F	Square punch perforation for 8-page or 12-page signatures. This helps to produce a strong book with deep glue penetration on the spine.	No	Yes	No	No	No	No
	AF-PP6		No	No	Yes	Yes	Yes	Yes
Strip Trim Device below 1st Knife	KT-ST6	Strip trimming after the cross fold section for multiple-up jobs.	No	Yes	Yes	Yes	Yes	Yes
Edge Trim Device below 1st Knife	KT-ET6	Edge trimming for 8-page or 12-page signatures.	No	Yes	Yes	Yes	Yes	Yes
Punch Perforation Unit below 1st Knife	KT-PP6	Square punch perforation for 16-page signatures with cross knife unit connection.	No	Yes	Yes	Yes	Yes	Yes
Perforation Unit below 2nd Knife	MS-2K	Slit perforation and scoring for 32-page signatures.	No	Yes	Yes	Yes	Yes	Yes
Knife Stopper Fine-adjustment Unit	-	The knife stopper can be fine-tuned in the range of +/-0.5 mm.	No	Standard	No	Standard	No	Standard
Gate Fold Buckle	GFB-74	Easy adjustment for precise, accurate gate folding.	No	Yes	Yes	Yes	Yes	Yes
Blades	-	Scoring, slit perforation, slitter, perforation and punch blades are available for various applications.	No	Yes	Yes	Yes	Yes	Yes
Flat Deflector	-	Replaceable flat type deflector with parallel buckle.	No	Yes	Yes	Yes	Yes	Yes
Deflector below Knife	KT-D74	Deflector type buckle below knife. Required when either the buckle below front knife or the buckle below rear knife is not used. Two deflectors are required when neither the buckle below front knife nor the buckle below rear knife are not used.	No	Selection	Selection	Selection	Selection	Selection
Buckle below Front Knife	KT-120	Maximum folding size is 120 mm. Manual type and automated type are available. This can be used on the front or rear side.	No					
Buckle below Rear Knife	KT-250	Maximum folding size is 250 mm. Manual type and automated type are available. This can be used on the rear side only.	No					

### Delivery Section

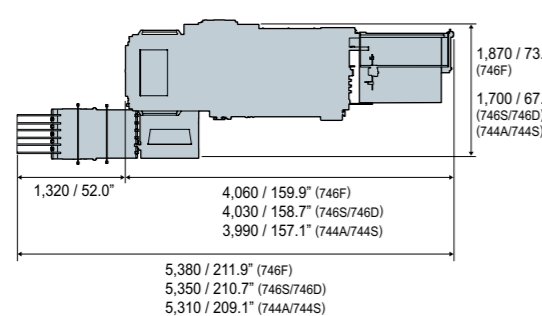
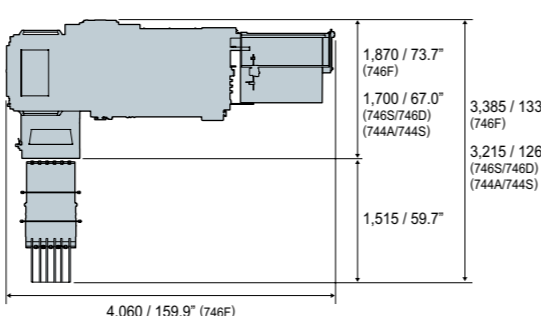
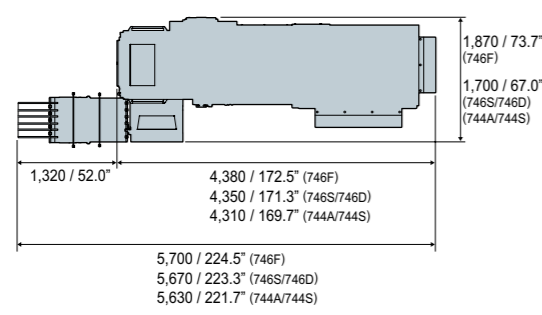
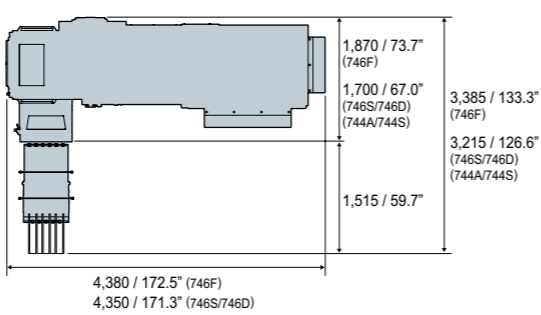
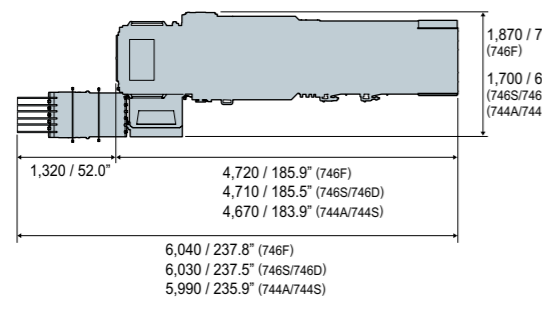
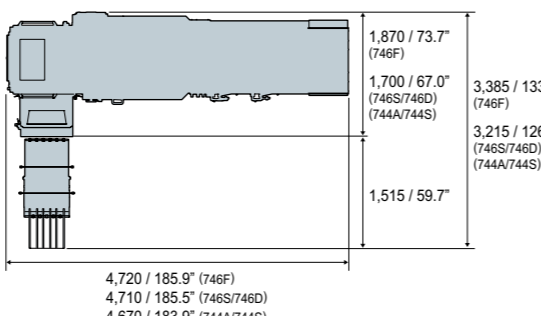
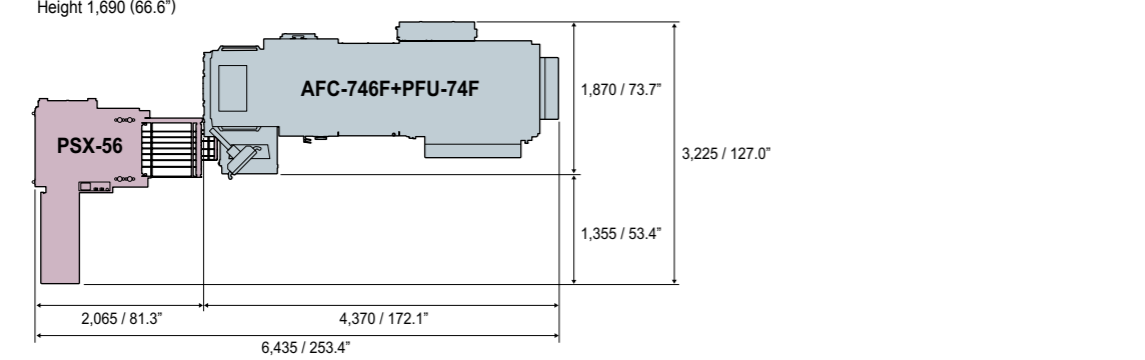
Name	Model	Description	Factory Option	746F	746S	746D	744A	744S
Press Stacker	PST-40	Compresses the signatures for reduced bulk and tighter folds.	No	Yes	Yes	Yes	Yes	Yes
Mobile Knife Fold Unit	MKU-54	Can be turned by 180 degrees to allow fold-up or fold-down flexibility.	No	Yes	Yes	Yes	Yes	Yes
Mobile Knife Fold Unit	MKU-54T	One buckle below the knife is standard.	No	Yes	Yes	Yes	Yes	Yes
Press Stacker with Pile Delivery	PSX-56	Stacked signatures or booklets are pressed and delivered to a comfortable working height.	No	Yes	Yes	Yes	Yes	Yes

### Others

Name	Model	Description	Factory Option	746F	746S	746D	744A	744S
JDF Network System	pXnet	Automated bindery control system with JDF workflow	No	Yes	Yes	Yes	Yes	Yes

# Specifications

## Machine Dimensions [Unit : mm (inch)]

Feed Unit	16-page Cross Fold	8-page Cross Fold
<b>Flat Pile Feeder</b> 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").	Height 1,690 (66.6") 	Height 1,690 (66.6") 
<b>Pallet Pile Feeder</b> 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).	Height 1,690 (66.6") 	Height 1,690 (66.6") 
<b>Round Pile Feeder</b> 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.	Height 1,690 (66.6") 	Height 1,690 (66.6") 
<b>Other Device</b>	Height 1,690 (66.6") 	

## Specifications

Model	AFC-746F	AFC-746S/746D	AFC-744A/744S
Machine Structure	6KTTL (6 Buckles + 1st Fold Knife + 2 Buckles below Knife <sup>*1</sup> + 2nd Fold Knife)		4KTTL (4 Buckles + 1st Fold Knife + 2 Buckles below Knife <sup>*1</sup> + 2nd Fold Knife)
Sheet Size	Flat Pile Feeder	Max. 738(W) x 1,100(L) mm (29.055" x 43.310") Min. 210(W) x 210(L) mm (8.270" x 8.270") [Side Lay Guide Minimum Set Position : 82(W) mm (3.3")]	
	Pallet Pile Feeder	Max. 738(W) x 1,100(L) mm (29.055" x 43.310") Min. 210(W) x 297(L) mm (8.270" x 11.695") [Side Lay Guide Minimum Set Position : 82(W) mm (3.3")]	
	Round Pile Feeder	Max. 738(W) x 1,300(L) mm (29.055" x 51.180") Min. 210(W) x 148(L) mm (8.270" x 5.830") [Side Lay Guide Minimum Set Position : 82(W) mm (3.3")]	
Sheet Weight Range	Normal Paper 35 to 209 gsm Art/Coated Paper 50 to 232 gsm	35 to 220 gsm	
Knife Fold Size	1st Knife	Max. 738(W) x 520(L) mm (29.0" x 20.4") (Knife Length: 550 mm [21.6"]) Min. 160(W) x 100(L) mm (6.3" x 4.0")	Max. 738(W) x 550(L) mm (29.0" x 21.6") Min. 160(W) x 100(L) mm (6.3" x 4.0")
	2nd Knife	Max. 520(W) x 365(L) mm (20.4" x 14.2") (Knife Length: 360 mm [14.2"]) Min. 160(W) x 100(L) mm (6.3" x 4.0")	Max. 550(W) x 360(L) mm (21.6" x 14.1") Min. 160(W) x 100(L) mm (6.3" x 4.0")
Feeding Mechanism	Flat Pile Feeder Pallet Pile Feeder Round Pile Feeder	Air Suction Rotor & 1 Cylinder Separator Head (Feed interval and suction time are adjustable.) Air Suction Rotor & Front Blower & Side Blower (Feed interval and suction time are adjustable.)	
Maximum Pile Height	Flat Pile Feeder	750 mm (29.5") [within 600 kg (1,323 lb)]	
	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)]	
	Round Pile Feeder	80 mm (3.1") (When loading the spread sheets)	
Belt Speed	30 to 240 m (99 to 787 ft.)/min. [Knife Fold: 240 m (787 ft.)/min.]	30 to 230 m (99 to 754 ft.)/min. [Knife Fold: 180 m (590 ft.)/min.]	
Standard Fold Roller	Combination of Soft Polyurethane Foam Rubber and Steel Roller		
Roller Gap Adjustment	Automatic Setting (All the roller gap sets up by inserting a single sheet at the thickness measuring detector.)	Insert the instructed number of sheets into the gap adjust lever.	
Automatic Setup Parts	Suction Head, Feed Table Guide, Side Lay Guide, Side Edge Guide, 1st to 6th Buckles, 1st and 2nd Knife Stoppers, 1st and 2nd Knife Stopper Side Guides, 1st knife Bounce Prevention Guide, K1/K2 Buckle Below Knife, Roller Gap (1st to 7th Rollers, Perforation Rollers, Rollers below 1st Knife and Rollers below 2nd Knife) (47 sections in total)	Side Lay Guide, Feed Table Guide, 1st to 6th Buckles, K2 Buckle, 1st and 2nd Knife Stoppers (10 sections in total)	Side Lay Guide, Feed Table Guide, 1st to 4th Buckles, 1st and 2nd Knife Stoppers (8 sections in total)
Fold Patterns	Parallel Fold, Open Gate Fold, Accordion Fold, Zigzag (4 panel) Fold, Zigzag (5 panel) Fold, Zigzag (6 panel) Fold, Zigzag (7 panel) Fold, Letter Fold, Roll Fold, Double Parallel Fold, 8-page Cross Fold, 12-page Transformation Fold, 12-page Cross Fold, 16-page Transformation Fold (1), 16-page Cross Fold, 16-page Transformation Fold (2), 24-page Cross Fold, 32-page Transformation Fold, DL Fold (Letter), DL Fold (Accordion)	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, Roll Fold, Double Parallel Fold, 8-page Cross Fold, 12-page Transformation Fold, 12-page Cross Fold, 16-page Transformation Fold (1), 16-page Cross Fold, 16-page Transformation Fold (2), 24-page Cross Fold, DL Fold (Letter), DL Fold (Accordion)	Parallel Fold, Short Fold, Open Gate Fold, Accordion Fold, Zigzag (4 panel) Fold, Zigzag (5 panel) Fold, Letter Fold, Double Parallel Fold, 8-page Cross Fold, 12-page Transformation Fold, 16-page Cross Fold, DL Fold, 16-page Transformation Fold, 32-page Transformation Fold
Job Memory	200 Jobs		
Voltage / Frequency	3-Phase 200 / 220 / 400 V, 50 / 60 Hz	Flat/Pallet Pile Feeder: 3-Phase 200 / 220 / 400 V, 50 / 60 Hz, 3-Phase 208 / 240 V, 60 Hz Round Pile Feeder: 3-Phase 200 V, 50 / 60 Hz, 220 V, 60 Hz, 400 V, 50 Hz	
Machine Dimensions	Flat Pile Feeder	4,060(W) x 1,870(D) x 1,690(H) mm (159.9" x 73.7" x 66.6")	4,030(W) x 1,700(D) x 1,690(H) mm (158.7" x 67.0" x 66.6")
	Pallet Pile Feeder	4,380(W) x 1,870(D) x 1,690(H) mm (172.5" x 73.7" x 66.6")	4,350(W) x 1,700(D) x 1,690(H) mm (171.3" x 67.0" x 66.6")
	Round Pile Feeder	4,720(W) x 1,870(D) x 1,690(H) mm (185.9" x 73.7" x 66.6")	4,710(W) x 1,700(D) x 1,690(H) mm (185.5" x 67.0" x 66.6")
	Conveyor	1,515(W) x 740(D) x 1,070(H) mm (59.7" x 29.2" x 42.2")	1,515(W) x 740(D) x 1,070(H) mm (59.7" x 29.2" x 42.2")
Installation Space	Flat Pile Feeder	6,080(W) x 4,085(D) mm (239.4" x 160.3")	6,045(W) x 3,715(D) mm (238.0" x 146.3")
	Pallet Pile Feeder	6,595(W) x 4,085(D) mm (259.7" x 160.3")	6,365(W) x 3,715(D) mm (250.6" x 146.3")
	Round Pile Feeder	6,935(W) x 4,085(D) mm (273.1" x 160.3")	6,725(W) x 3,715(D) mm (264.8" x 146.3")

\*1 1 buckle is standard.

think intelligent automation.

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

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