

Computerized Cross Folder AFC-744AKTSC

Horizon

AFC-744AKTSC

Mobile Knife Fold Unit MKU-54/54T

Press Stacker PST-40

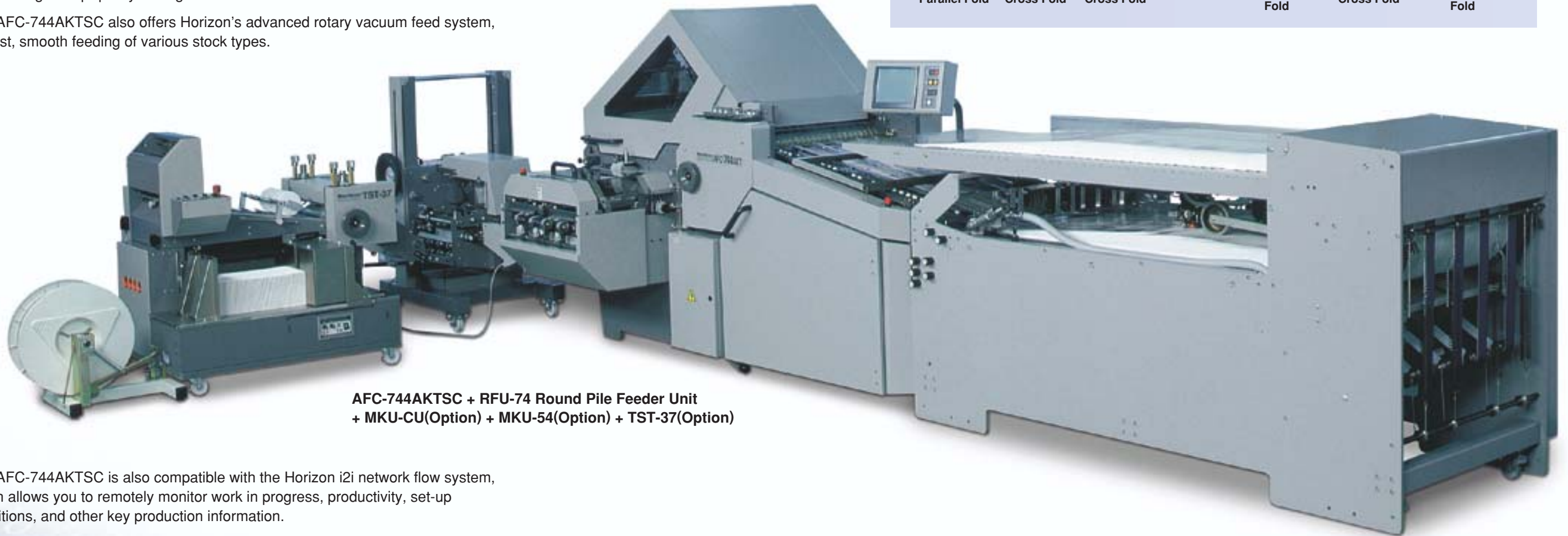
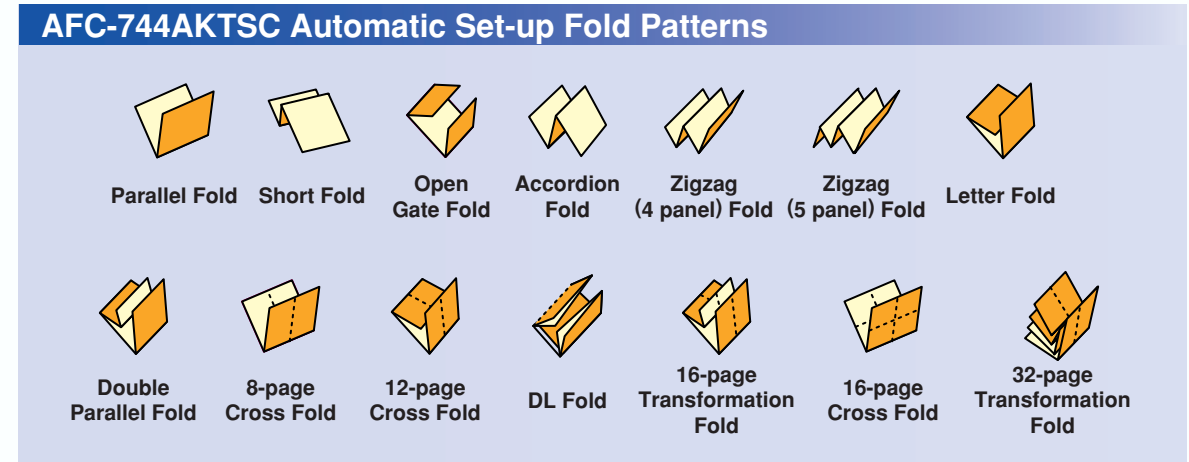
Press Stacking & Semi-auto Bundling Unit TST-37

B1-Format Folder
Simple and Easy to Operate



The AFC-744AKTSC 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.

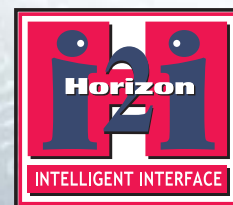
- The AFC-744AKTSC is equipped with a large, icon-based touch-screen for user-friendly operation, automated fold plate and sheet guide adjustments driven by stepper motors, high-speed belts (230 m/min.), and the highest level of precision engineering for top quality folding.
- The AFC-744AKTSC also offers Horizon's advanced rotary vacuum feed system, for fast, smooth feeding of various stock types.



AFC-744AKTSC + RFU-74 Round Pile Feeder Unit + MKU-CU(Optional) + MKU-54(Optional) + TST-37(Optional)

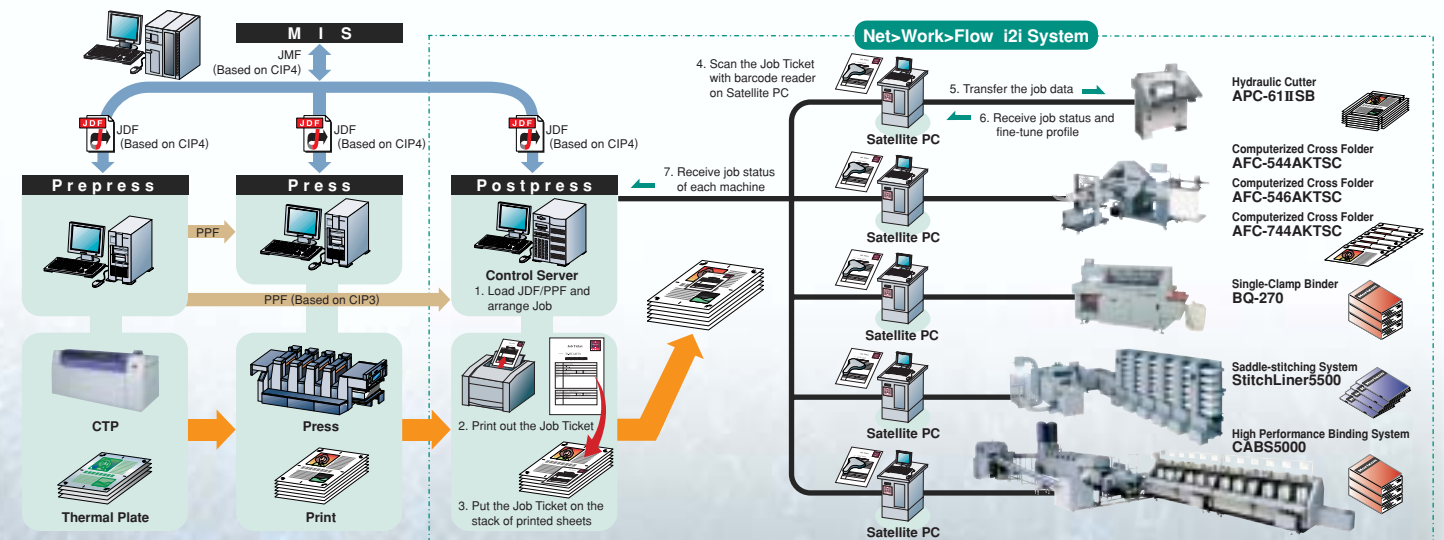
- The AFC-744AKTSC is also compatible with the Horizon i2i network flow system, which allows you to remotely monitor work in progress, productivity, set-up conditions, and other key production information.

What is i2i System?



The Horizon i2i system can be integrated with pre-press and printing workflow to create a comprehensive automated CIP4 bindery with the prospect of jobs passing from the eye of the creator to the eye of the beholder in a single i2i Net>Work>Flow for ultimate flexibility and efficiency in the on-demand era.

i2i Network Flow System based on the view of CIP3 or CIP4



An accurate computer-controlled cross-folder for maximum sheet width 740 mm (29.1"). The AFC-744AKTSC combines a sophisticated but user-friendly set-up and management system with state-of-the-art technology and rock-solid construction.

AUTO SHOWS AUTOMATED SET-UP SECTIONS.

A total of 8 sections (1st to 4th buckles, 1st and 2nd knife stopper, feed guide bar, and side lay guide) are set-up automatically.

AUTO 1st to 4th Buckles

Buckle Folding



- The specially-coated buckle plates create less friction with the paper to help maintain fold accuracy.
- The 1st buckle plate is equipped with a swing-arm deflector to prevent damage or marking of the sheet. And the 2nd to 4th buckles are equipped with an integrated deflector / stopper combination for operator convenience.
- The buckle section is set-up automatically by inputting the fold pattern and sheet size via the LCD touch-screen display.

AUTO 1st & 2nd Knife Stopper

Knife Folding



- The feed interval is automatically set according to the knife delay time for maximum folding efficiency.
- The inclination of the knife can be easily adjusted with the knife tilt adjusting knob.
- The knife inching function provides easier alignment of the knife position to perforate or score at fold lines on the sheet, and avoids trial-and-error test folding.

Sub-Control Panel

- Basic operation, start, stop, and other adjustments (belt speed, feed intervals, and knife delay time) are performed on the sub-control console.
- Forward and reverse inching are also useful for adjustment.

Below Knife Section



- The buckle plates under the knife can be installed either on operation side or drive side of the folder.
- The slitter under the knife fold section employs a removable roller shaft so that the position of the slitter wheel can be changed easily.
- The slitter also allows for the trimming of the edges of an 8-page folded signature. Trimmings are efficiently removed.
- For 32-page cross fold, the perforation shaft and blade can be attached below the 2nd knife fold section. (Option)

Perforation

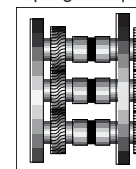


- The AFC-744AKTSC can be a straight perforator. It supports perforation, slit perforation, scoring, slit, and center cut-slit.
- The perforation shaft is quick and easy to install or detach. 3 sets of cutter blade holders are the standard equipment.
- Three perforating and two scoring operations are possible. A maximum of 20 blades can be attached to the shaft.
- Center-cut is available for multiple-up jobs with the use of slitter blades.

Folding Rollers



Helical gears driven with flexible cross couplings for quality fold.



- The folding rollers feature a unique combination of steel and specially-formulated polyurethane rubber for superior grip and sharp, consistent folding on a wide variety of stocks.
- The operator's screen indicates the required fold roller gap adjustment. The operator then simply inserts the indicated number of sheets.
- The fold roller system employs helical gears for quiet operation and cross couplings for quality folding.

LCD Touch-screen



- The large and interactive icon-based touch-screen is provided for operator convenience.
- To set-up the machine, the operator touches the icon for the desired fold pattern (14 fold patterns are available, including 16-page cross-fold, 8-page cross-fold, and direct mail fold) and inputs the paper size. The folder automatically calculates and then sets each of eight variable sub-stations, including the feed guide, register guide, 1st to 4th buckles, and two knife stoppers.
- The LCD touch-screen prompts the operator through all remaining settings, including how many sheets to insert to adjust the roller gap, for quick and easy changeover.
- Required micro-adjustments are accomplished in second and can be performed on-the-fly.
- The AFC-744AKTSC can memorize up to 100 different job settings including fine-tunings, suction time, feed intervals, knife delay, etc., for instant total job recall.
- The Operation Record screen provides complete system status at a glance.
- Optional devices such as the Gate Fold Plate and Press Stacker can be set-up and operated through the main LCD console on the AFC-744AKTSC.

AUTO Side Lay Guide

Side Lay Guide

- In the event of double feeds, only the register alignment table stops to allow for quick removal of the jammed sheets while other sheets in the folder are processed completely.
- The register alignment table is coated with a special anti-static plating.

Suction Head



- An innovative suction head provides smooth feeding free from double feeding, even with recycled paper.
- A newly developed single cylinder suction head system prevents sheets from fluttering for accurate sheet separation.

Feed Rotor



- The high quality polyurethane feed rotor smoothly delivers sheets to the register alignment table without sheet scratching or buffing.
- The vacuum pick-up point and the front and side air nozzles which blow air laterally for smooth feeding of all sheet types can be adjusted.

AFC-744AKTSC + PFU-74 Palette Feeder Unit

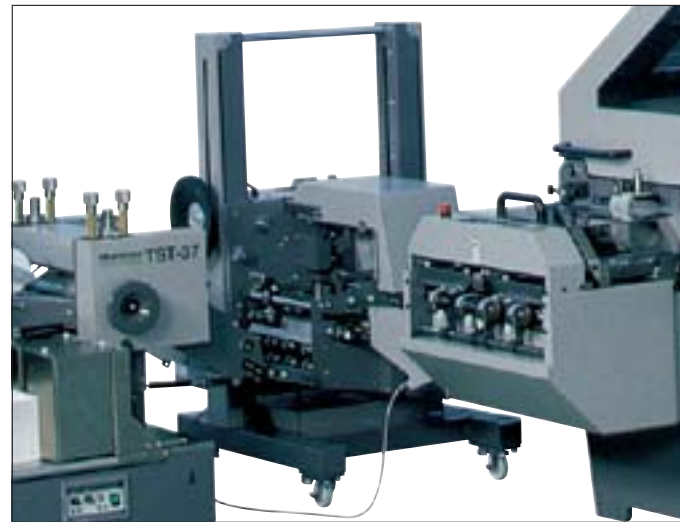
AUTO Feed Guide Bar

Feed Table

- For consistently reliable feeding, the feed table lift is inverter-controlled to maintain proper distance between sheets and the vacuum feed wheel.
- The pile height control system employs a capacity sensor for reliable sheet feeding regardless of the print condition.
- The pile height sensor can also be positioned as needed for different sheet sizes.
- For sheet loading, the feed table automatically descends to an ergonomically safe and easy loading height.
- The AFC-744AKTSC can feed a maximum sheet size of 740 x 1,100 mm (29.1" x 43.3").

Mobile Knife Fold Unit : MKU-54/54T

- ◆ The MKU-54 features the knife unit reverse function for upward or downward sheet delivery.
- ◆ Two buckles below knife can be attached on the MKU-54T. (one buckle is standard.)
- ◆ The speed of MKU-54/54T is fully synchronized with Horizon folder.
- ◆ The MKU-CU Mobile Knife Fold Unit Conveyor is necessary when MKU-54/54T is connected with AFC-744AKTSC.



MKU-54/54T Major Specifications			
Sheet Size	Max. 540(W) x 330(L) mm (21.2" x 12.9") Min. 160(W) x 100(L) mm (6.3" x 4.0")		
Max. Folding Thickness	Max. 2 mm (0.078") (Booklet of 40 pages [81 gsm])		
Sheet Weight Range	35 to 220 gsm		
Belt Speed	50 to 230 m/min. (164 to 754 ft./min.)		
Voltage / Frequency	3-Phase 200 / 208 / 220 / 230 V, 50 / 60 Hz		
Rated Current	3-Phase 200 V	50 / 60 Hz	1.3 / 1.5 A
	3-Phase 208 V		
	3-Phase 220 V		
	3-Phase 230 V		
Power Consumption	3-Phase 200 V	50 / 60 Hz	300 / 315 W
	3-Phase 208 V		
	3-Phase 220 V		
	3-Phase 230 V		
Heat Output	950 kJ (230 kcal)		
Available Folding Machine and Stitcher	AFC-744AKTSC / AFC-742KSC / AFC-546AKTSC / AFC-544AKTSC / SPF-30 / SPF-20A / SPF-20		
In-feed Height	Highest Position : 970 mm (38.1") Lowest Position : 530 mm (20.9")		
Delivery Height	Highest Position : 855 mm (33.6") Lowest Position : 415 mm (16.4")		
Machine Dimensions	1,100(W) x 800(D) x 1,350(H) mm (43.4" x 31.5" x 53.2")		
Machine Weight	200 kg (441 lb)		

Press Stacker : PST-40

- ◆ Maximum 440 mm (17.3") wide signature can be pressed.
- ◆ The first rollers remove the air and the second rollers powerfully compress the signatures for reduced bulk and tighter folds.
- ◆ The PST-40 can be started or stopped from the AFC-744AKTSC/742KSC/546AKTSC/544AKTSC control console.
- ◆ The round belt change system at the in-feed section minimizes set-up time for change of sheet size.
- ◆ The PST-40 can be operated independently of the folder for the pressing of saddle stitched booklets.
- ◆ The height of the press unit is simply adjusted by the remote controller.

Rollers

- The first rollers remove the air and the second rollers powerfully compress the signatures for reduced bulk and tighter folds.
- The roller gap can be adjusted by inserting the sheets to be pressed.
- A 16-page cross-fold can be compressed powerfully.

In-feed Section

- Multiple sheets are firmly held with the round belts and transported to the press section continuously.
- The feed angle can be adjusted to the sheet delivery from the folder.

Operation Panel

- Signatures can be offset separated individually or by group, depending on your job requirement.

PST-40 Major Specifications			
Model	Press Stacker		Main Body Fixing Method
Press Width	Max. 440 mm (17.3") [Without offset : 470 mm (18.5")]		Adjustment Bolt Caster with Stopper
Press Length	Min. 64 mm (2.5")		Operation Panel
Production Speed	Depends on fold device.		Total Counter
Roller Speed	Max. 210 m/min. (826.8"/min.)		Sheet Count / Offset Count
In-feed Section	Belt Change System		Preset Counter
Offset	Number of Offset Sheets	1 sheet per setting (0 to 9999 sheets) or All	Setting of the Number of Offset Sheets (0 to 9999)
	Offset Amount	30 mm (1.1")	Single Phase 200 / 220 / 230 V, 50 / 60 Hz
Press	Air Remove Roller	Gap is adjustable by inserting the instructed number of sheets.	Power Consumption
	Press Roller	Pressure Welding (Gap is adjustable by inserting the instructed number of sheets.)	300 W, 50 Hz / 310 W, 60 Hz
Conveyor	Model	Horizontal Delivery Conveyor	When Folded
	Belt Speed	0 to 12 m/min. (0" to 47.2"/min.)	1,200(W) x 795(D) x 1,230(H) mm (47.3" x 31.3" x 48.5")
In-feed Height	400 to 950 mm (15.8" to 37.4") [Tilt Vertical Interval 240 mm (9.4")]		When Operating
Main Body Lift	Moves up and down by a motor.		When connecting to the parallel folding exit section : 1,230(W) x 795(D) x 1,230(H) mm (48.5" x 31.3" x 48.5") [When pulling out the receiving tray : 1,540(W) mm (60.7")]
			When connecting to the cross folding exit section : 1,490(W) x 795(D) x 1,230(H) mm (58.7" x 31.3" x 48.5") [When pulling out the receiving tray : 1,800(W) mm (70.9")]
			Machine Weight
			280 kg (617.4 lb)

Round Pile Feeder Unit : RFU-74

- The round pile feeder unit can feed 4-page or 8-page signature, curled/waved sheets, and milled-edge sheets from web printer.

Palette Feeder Unit : PFU-74

- The palette feeder unit accepts the piled sheet from the printing press to maximize operator convenience and to minimize folder down time.

Gate Fold Buckle : GFB-74



- The optional gate fold buckle provides for precise, accurate gate folding.

Gluing Unit : CGU-50



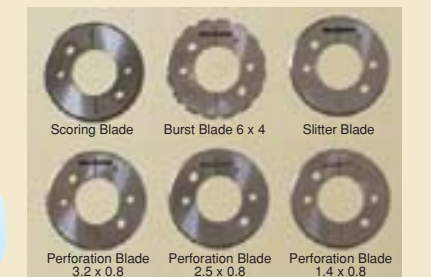
- Folding, gluing, and edge trimming operations are performed efficiently. The gluing unit CGU-50 can produce 8-page or 12-page glued booklets.
- The amount of glue can be adjusted depending on the dot size of glue.
- The computer controlled gluing unit ensures neatly finished booklets.
- The glue is suitable for recycling.

Strip Trim Device : AF-ST6



- Strip trimming is available for multiple-up jobs with slitter.

Blades



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

Press Stacking & Semi-auto Bundling Unit : TST-37

- ◆ The first rollers remove the air and the second rollers powerfully compress the signatures for reduced bulk and tighter folds.
- ◆ The TST-37 can be started or stopped from the AFC-744AKTSC/742KSC/546AKTSC/544AKTSC control console.
- ◆ The round belt change system at the in-feed section minimizes set-up time for change of sheet size.
- ◆ Pressed stacks are automatically transferred to the bundling section for optimum efficiency and labor savings.

Operation Panel

- The lamp illuminates in the event of misfeeding or mispressing.
- The TST-37 can start or stop the operation of the AFC-744AKTSC/742KSC/546AKTSC/544AKTSC.

Rollers

- The first rollers remove the air and the second rollers powerfully compress the signatures for reduced bulk and tighter folds.
- Even a 32-page cross-fold can be compressed powerfully.
- The roller gap can be easily adjusted by inserting the sheets to be pressed.

In-feed Section

- The feed angle can be adjusted to the sheet delivery from the folder.

TST-37 Major Specifications			
Model	Press Stacking & Semi-auto Bundling Unit		Stack Capacity Set-up
Signature Size	Max. 370(W) x 260(L) mm (14.5" x 10.2") Min. 210(W) x 140(L) mm (8.3" x 5.6")		Setting by press guide position.
Production Speed	10,000 sheets/hr.		Transfer to Bundling Section
Roller Speed	Max. 180 m/min. (708.7"/min.)		Operation
In-feed Section	Belt Change System		After arriving at set-up stack capacity, sheet feeding of the folder is stopped to transfer.
Press	Air Remove Roller	Gap is adjustable by inserting the instructed number of sheets.	Transfer Position
	Press Roller	Pressure Welding (Gap is adjustable by inserting the instructed number of sheets.)	Folded sheets are automatically positioned at the center of the bundling section.
Conveyor	Operation	Intermittent operation only at in-feed time.	Compression Power
	Belt Speed	0 to 12 m/min. (0" to 47.2"/min.)	About 200 [N] (About 20 [Kgf])
In-feed Height	440 to 680 mm (17.4" to 26.7")		Bundling
Wrapping Paper Thickness	1 to 2.5 mm (0.04" to 0.09")		Unit
Wrapping Paper Pile Height	45 mm (1.7")		Bundle
Stack Capacity	600 sheets (64 gsm, 16-page cross fold) (With attachment : 150 sheets)		PP Band 12(W) mm (0.47")
			Operation Panel
			Total Counter / Error Lamp (No wrapping paper, Conveyor motor lock, Mis-transfer to bundling section, Mis-compression before bundling)
			Voltage / Frequency
			3-Phase 200 / 220 V, 50 / 60 Hz Single Phase 220 / 230 / 240 V, 50 / 60 Hz (for Europe)
			Power Consumption
			1.2 kW, 50 Hz / 1.1 kW, 60 Hz 3.0 kW, 50 / 60 Hz (for Europe)
			Machine Dimensions
			[Separate Reel : 665 x 460 x 525 mm (26.2" x 18.2" x 20.7")]
			Machine Weight
			370 kg (815.9 lb) [Separate Reel : 30 kg (66.2 lb)]

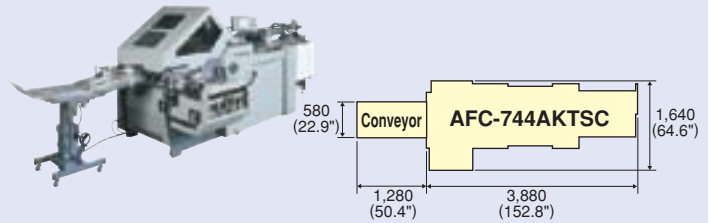
AFC-744AKTSC Major Specifications

Machine Structure	4KTTL (4 Buckles+Fold Knife+2 Buckles Below Knife+2nd Fold Knife)	
Max. Sheet Size	With Flat Pile Feeder/Palette Feeder	740(W) x 1,100(L) mm (29.1" x 43.3")
	With Round Pile Feeder	740(W) x 1,300(L) mm (29.1" x 51.1")
Min. Sheet Size	With Flat Pile Feeder	210(W) x 210(L) mm (8.3" x 8.3")
	With Round Pile Feeder	210(W) x 297(L) mm (8.3" x 11.7")
	With Palette Feeder	210(W) x 148(L) mm (8.3" x 5.9")
Sheet Weight Range	[Side Lay Guide Minimum Set Position : 82(W) mm (3.3")] 35 to 220 gsm	
Buckle Fold Length	1st Buckle	55 to 560 mm (2.2" to 22") (Auto)
	2nd Buckle	30 to 480 mm (1.2" to 18.8") (Auto)
	3rd Buckle	30 to 480 mm (1.2" to 18.8") (Auto)
	4th Buckle	30 to 330 mm (1.2" to 12.9") (Auto)
	K1 Buckle	Deflector (Replaceable with K2 buckle)
	K2 Buckle	55 to 120 mm (2.2" to 4.7") (Manual Set-up)
Knife Fold Size	1st Knife	Max. 740(W) x 550(L) mm (29.1" x 21.6") Min. 160(W) x 100(L) mm (6.3" x 4")
	2nd Knife	Max. 550(W) x 360(L) mm (21.6" x 14.1") Min. 160(W) x 100(L) mm (6.3" x 4")
Feeding Mechanism	With Flat Pile Feeder/Palette Feeder	Air Suction Rotor & 1 Cylinder Separator Head
	With Round Pile Feeder	Air Suction Rotor & Front Blower & Side Blower 1 Cylinder Separator Head (Feed interval and suction time are adjustable.)
Maximum Pile Height	With Flat Pile Feeder	750 mm (29.5") [within 600 kg (1,323 lb)]
	With Palette Feeder	1,200 mm (47.2") (palette included) [within 1,000 kg (2,205 lb)]
Belt Speed	50 to 230 m (54 to 250 yd.)/min. [Knife Fold : 180 m (196 yd.)/min.]	
Production Speed	36,000 sheets/hr. [A4 (8.5" x 11") Parallel Fold] 11,000 sheets/hr. [625(W) x 880(L) mm (24.6" x 34.6") 16-page Cross Fold]	
Standard Fold Roller	Combination of Urethane Foam (soft PU) Rubber and Steel Roller	
Roller Gap Adjustment	Insert the instructed number of sheets into the gap adjust lever.	
Bursting	Parallel Fold	Cut : 10 mm (0.39") Blank : 4 mm (0.16") Cut : 4 mm (0.16") Blank : 2.5 mm (0.10")
	Below Knife	Cut : 9 mm (0.35") Blank : 3 mm (0.12") Cut : 2.5 mm (0.10") Blank : 0.8 mm (0.03")
Perforation	Min. Line Distance : 66 mm (2.6") / Min. Line from Sheet Edge : 12 mm (0.48")	
Scoring	Scoring Width : 1 mm (0.04") (Depends on sheet type)	
Cutters	3 pcs + 1 pc (Accessory) (Possible to add up to 14 pcs)	
Automatic Setup	Feed Guide Bar, Side Lay Guide, 1st to 4th Buckles, 1st and 2nd Knife Stoppers	
Automatic Setup Accuracy	Setting Dimension : +/- 1 mm (0.04") / Round Accuracy : +/- 0.1 mm (0.004")	
Deflectors	1st Buckle	Buckle Stopper and Swing-Arm Deflector
	2nd to 4th Buckle	Integrated Stopper / Deflector
	K1 Buckle (Below Knife)	Deflector
	K2 Buckle (Below Knife)	Buckle Stopper and Swing-Arm Deflector
Fold Patterns	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 Cross Fold, DL Fold, 16-page Transformation Fold, 16-page Cross Fold, 32-page Transformation Fold	
Job Memory	100 Jobs	
Vacuum Pump	Flow	50 m ³ /hr. / 60 m ³ /hr. (With Round Pile Feeder)
	Voltage / Frequency	3-Phase ∇230 / Y400 V +/- 10 % 50 / 60 Hz
	Power Consumption	3.0 kW / 3.6 kW (50 / 60 Hz)
Voltage / Frequency	3-Phase 220 V, 60 Hz 400 V, 50 Hz	
	Rated Current	3-Phase 220 V 60 Hz
3-Phase 400 V 50 Hz		7.4 A (With Round Pile Feeder)
		7.2 A (With Palette Feeder)
Power Consumption (Including Pump)	3-Phase 220 V 60 Hz	4.1 kW (With Flat Pile Feeder)
	3-Phase 400 V 50 Hz	3.5 kW (With Flat Pile Feeder/Palette Feeder) 4.3 kW (With Round Pile Feeder)
Heat Output	5,800 kJ (1,390 kcal)	
Machine Dimensions	With Flat Pile Feeder	3,880(W) x 1,640(D) x 1,617(H) mm (152.8" x 64.6" x 63.7")
	With Round Pile Feeder	4,560(W) x 1,640(D) x 1,617(H) mm (179.6" x 64.6" x 63.7")
	With Palette Feeder	3,960(W) x 1,640(D) x 1,617(H) mm (156.0" x 64.6" x 63.7")
	Conveyor : 1,280(W) x 580(D) x 1,070(H) mm (50.4" x 22.9" x 42.2")	
Noise Level	86 dB [1,000(L) x 700(W) mm (39.4" x 27.6") -16-page cross fold- 64 gsm of sheet at maximum speed]	
Machine Weight	With Flat Pile Feeder	1,718 kg (3,788 lb) / Conveyor : 81 kg (179 lb) / Vacuum Pump : 66 kg (146 lb) / Transformer : 45 kg (99 lb)
	With Round Pile Feeder	1,950 kg (4,300 lb)
	With Palette Feeder	1,800 kg (3,969 lb)

Machine Dimensions Unit : mm (inch)

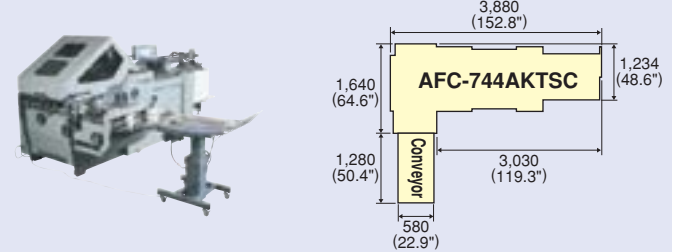
Parallel Fold

Height = 1,617 (63.7")



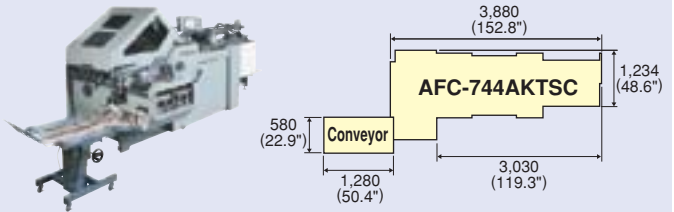
8-page Cross Fold

Height = 1,617 (63.7")



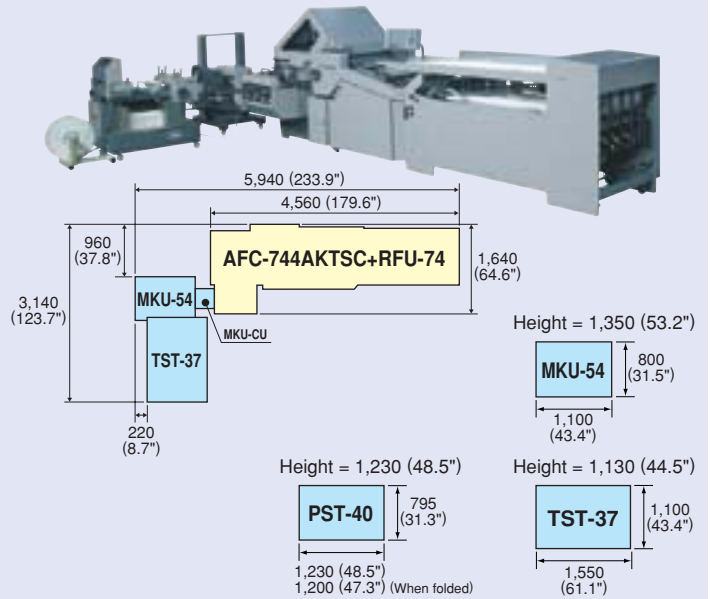
16-page Cross Fold

Height = 1,617 (63.7")



32-page Cross Fold

Height = 1,617 (63.7")



Manufactured by : Taiyo Seiki Co., Ltd.



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

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