

Horizon

AFC-744AKTSC

Mobile Knife Fold Unit MKU-54/54T

Press Stacker PST-40

Press Stacking & Semi-auto Bundling Unit TST-37

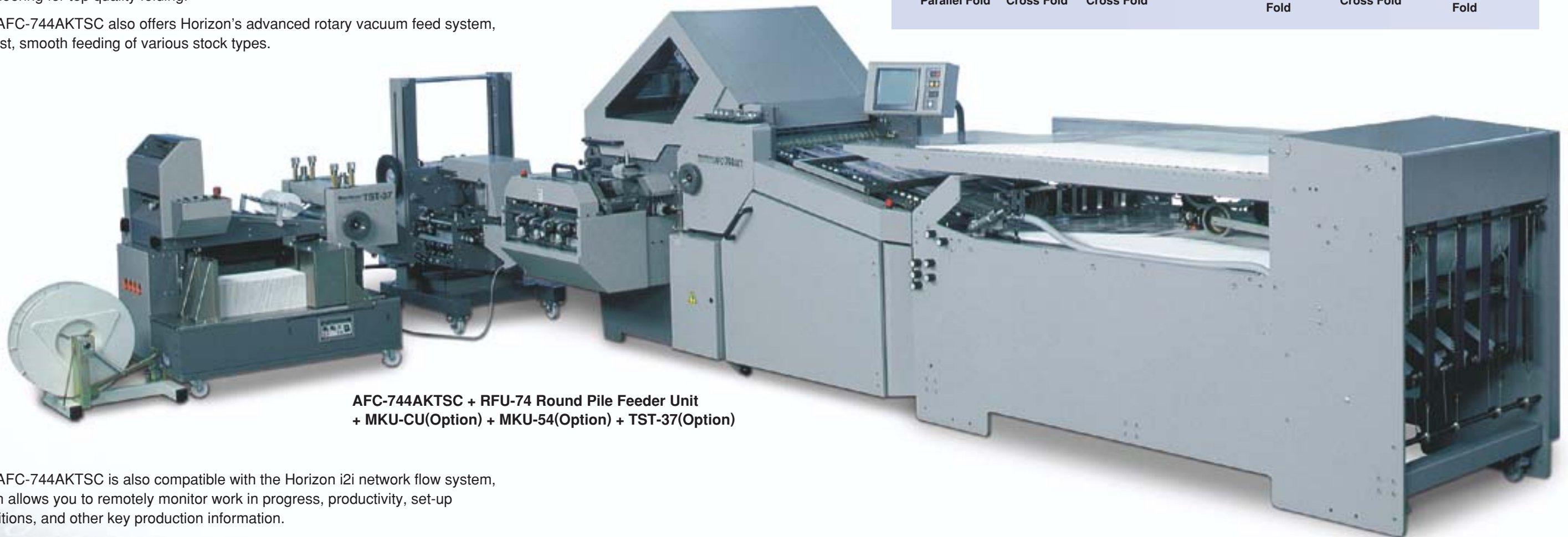
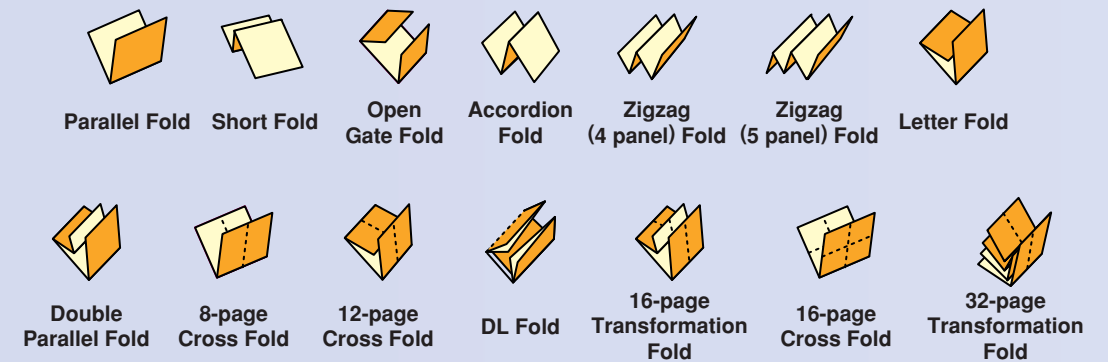
B1-Format Folder Simple and Easy to Operate



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.

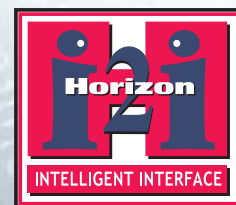
AFC-744AKTSC Automatic Set-up Fold Patterns



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

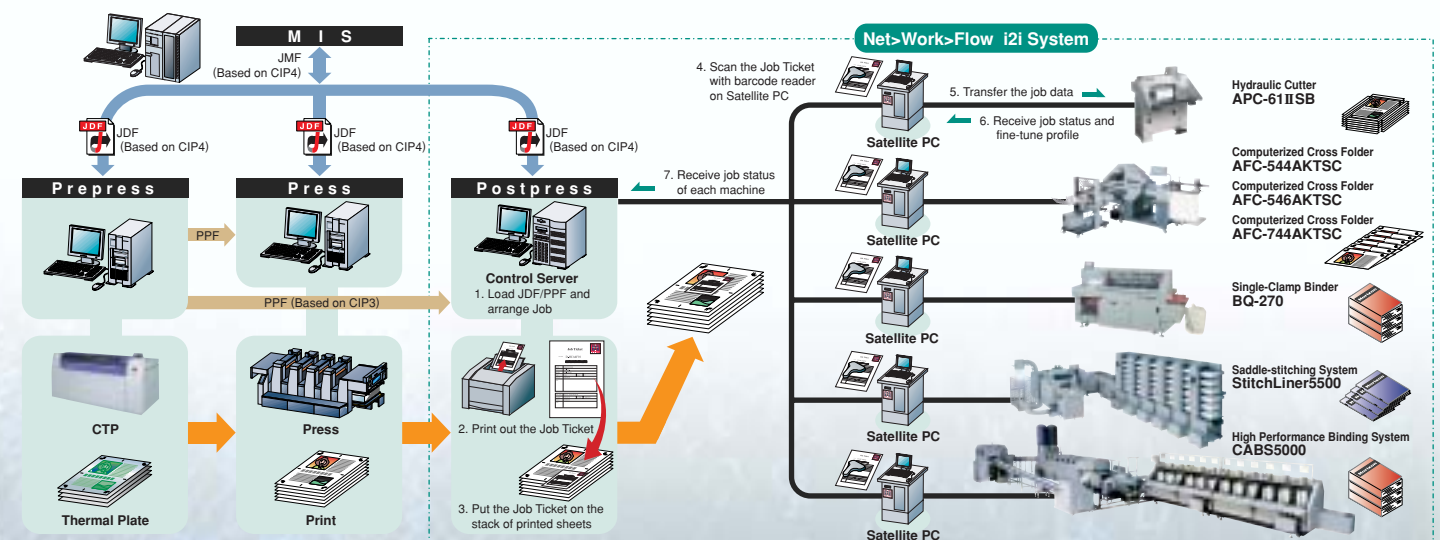
- The AFC-744AKTSC is also compatible with the Horizon i2i network flow system, which allows you to remotely monitor work in progress, productivity, set-up conditions, and other key production information.

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.

1st to 4th Buckles

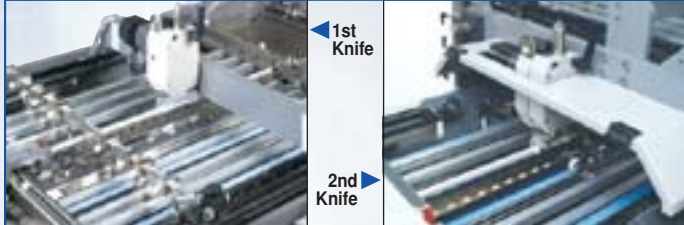
Buckle Folding



- 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.

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.

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.

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.

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

Feed Guide Bar

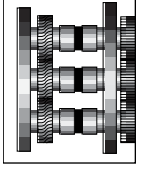
Feed Table

- 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").

Folding Rollers



Helical gears driven with flexible cross couplings for quality fold.

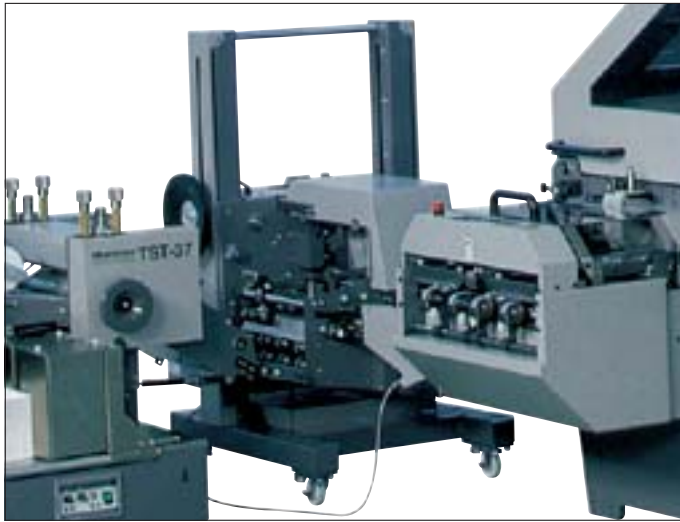


- The folding rollers feature a unique combination of steel and specially-formulated polyurethane rubber for superior grip and sharp, consistent folding on a wide variety of stocks.
- The operator's screen indicates the required fold roller gap adjustment. The operator then simply inserts the indicated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

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 | | | 1.3 / 1.4 A |
| Power Consumption | 3-Phase 200 V | 50 / 60 Hz | | 300 / 315 W |
| | 3-Phase 208 V | | | 310 / 320 W |
| | 3-Phase 220 V | | | 320 / 325 W |
| | 3-Phase 230 V | | | 325 / 330 W |
| 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) | | | |

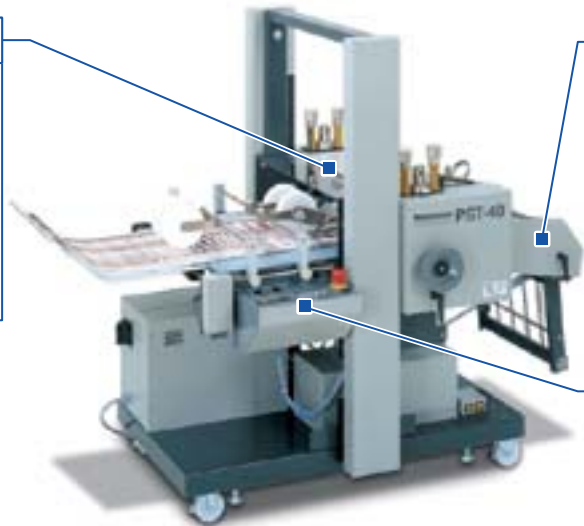


Press Stacker : PST-40

- ◆ 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 | | Adjustment Bolt | |
| Press Width | Max. 440 mm (17.3") [Without offset : 470 mm (18.5")] | | Caster with Stopper | |
| Press Length | Min. 64 mm (2.5") | | Operation Panel | |
| Production Speed | Depends on fold device. | | Total Counter | Sheet Count / Offset Count |
| Roller Speed | Max. 210 m/min. (826.8"/min.) | | Preset Counter | Setting of the Number of Offset Sheets (0 to 9999) |
| In-feed Section | Belt Change System | | Voltage / Frequency | |
| Offset | Number of Offset Sheets | 1 sheet per setting (0 to 9999 sheets) or All | Power Consumption | |
| | Offset Amount | 30 mm (1.1") | | |
| Press | Air Remove Roller | Gap is adjustable by inserting the instructed number of sheets. | Machine Dimensions | When Folded |
| | Press Roller | Pressure Welding (Gap is adjustable by inserting the instructed number of sheets.) | | 1,200(W) x 795(D) x 1,230(H) mm (47.3" x 31.3" x 48.5") |
| Conveyor | Model | Horizontal Delivery Conveyor | | 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")] |
| | Belt Speed | 0 to 12 m/min. (0" to 47.2"/min.) | | 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")] |
| In-feed Height | 400 to 950 mm (15.8" to 37.4") [Tilt Vertical Interval 240 mm (9.4")] | | Machine Weight | |
| Main Body Lift | Moves up and down by a motor. | | | |

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



Gluing Unit Controller



Gluing

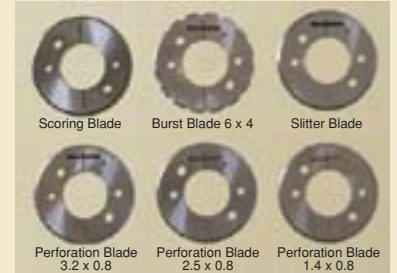
- Folding, gluing, and edge trimming operations are performed efficiently. The gluing unit CGU-50 can produce 8-page or 12-page glued booklets.
- The amount of glue can be adjusted depending on the dot size of glue.
- The computer controlled gluing unit ensures neatly finished booklets.
- The glue is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

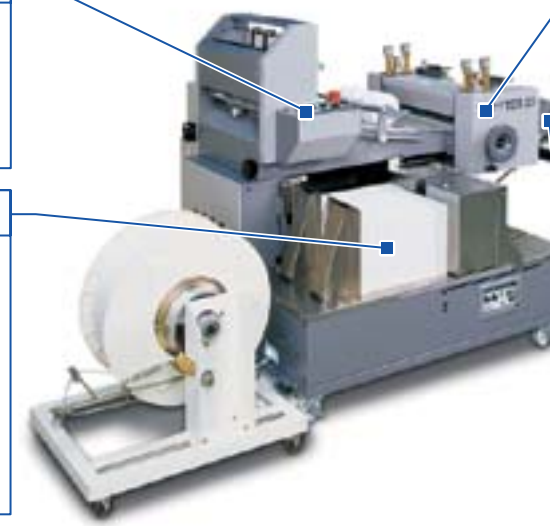
- ◆ The first rollers remove the air and the second rollers powerfully compress the signatures for reduced bulk and tighter folds.
- ◆ The TST-37 can be started or stopped from the AFC-744AKTSC/742KSC/546AKTSC/544AKTSC control console.
- ◆ The round belt change system at the in-feed section minimizes 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.

Bundling Unit

- The bundling unit is manually operated so that the stack size and bundling timing can be set according to the folding speed.
- For operator convenience, the folded sheets are always positioned at the center of the bundling section, and the plastic tape is prepared automatically.



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

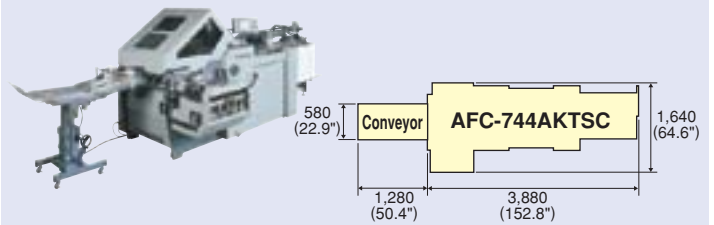
AFC-744AKTSC Major Specifications

| | | |
|---|--|--|
| 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") |
| [Side Lay Guide Minimum Set Position : 82(W) mm (3.3")] | | |
| Sheet Weight Range | 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] | |
| 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") |
| | Below Knife | Cut : 4 mm (0.16") Blank : 2.5 mm (0.10") |
| Perforation | Cut : 9 mm (0.35") Blank : 3 mm (0.12") | |
| | Cut : 2.5 mm (0.10") Blank : 0.8 mm (0.03") | |
| Scoring | Min. Line Distance : 66 mm (2.6") / Min. Line from Sheet Edge : 12 mm (0.48") | |
| Cutters | Scoring Width : 1 mm (0.04") (Depends on sheet type) | |
| Automatic Setup | 3 pcs + 1 pc (Accessory) (Possible to add up to 14 pcs) | |
| Automatic Setup Accuracy | Feed Guide Bar, Side Lay Guide, 1st to 4th Buckles, 1st and 2nd Knife Stoppers | |
| Deflectors | Setting Dimension : +/- 1 mm (0.04") / Round Accuracy : +/- 0.1 mm (0.004") | |
| | 1st Buckle | Buckle Stopper and Swing-Arm Deflector |
| | 2nd to 4th Buckle | Integrated Stopper / Deflector |
| | K1 Buckle (Below Knife) | Deflector |
| Fold Patterns | K2 Buckle (Below Knife) | Buckle Stopper and Swing-Arm Deflector |
| | 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 m³/hr. / 60 m³/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 |
| | 3-Phase 220 V | 60 Hz |
| | 3-Phase 400 V | 50 Hz |
| | Rated Current | 12.3 A (With Flat Pile Feeder) 7.6 A (With Flat Pile Feeder) 7.4 A (With Round Pile Feeder) 7.2 A (With Palette Feeder) |
| Power Consumption (Including Pump) | 3-Phase 220 V | 60 Hz |
| | 3-Phase 400 V | 50 Hz |
| Heat Output | With Flat Pile Feeder | 4.1 kW (With Flat Pile Feeder) 3.5 kW (With Flat Pile Feeder/Palette Feeder) 4.3 kW (With Round Pile Feeder) |
| | With Round Pile Feeder | 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)

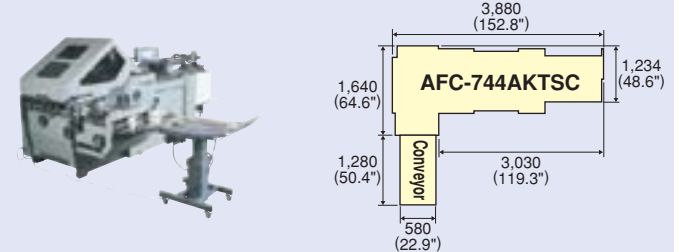
Parallel Fold

Height = 1,617 (63.7")



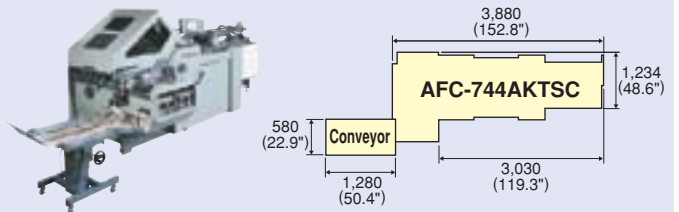
8-page Cross Fold

Height = 1,617 (63.7")



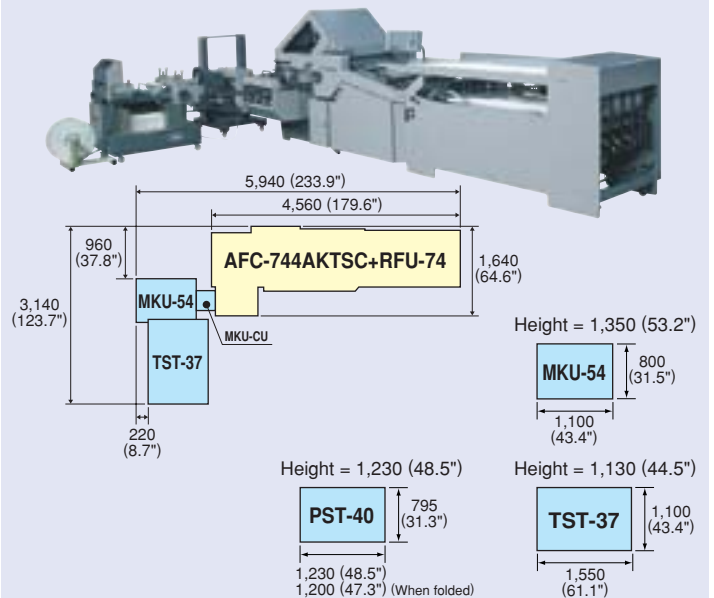
16-page Cross Fold

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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