

Horizon

AFC-544AKTSC/546AKTSC

Press Stacker PST-40

Press Stacking & Semi-auto Bundling Unit TST-37



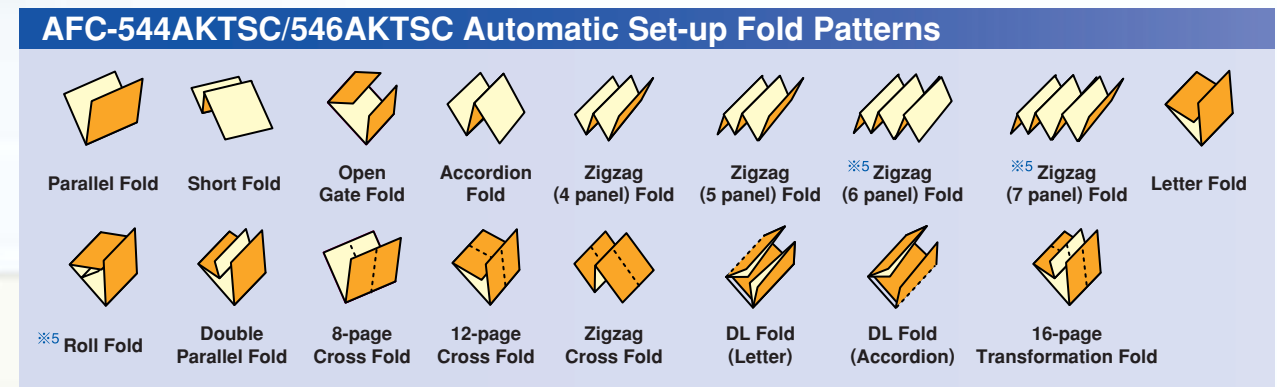
think
automation.

※1 Equipped with 6 buckle plates for a wide variety of folding.
 The AFC-544AKTSC/546AKTSC features user-friendly operation with automatic adjustment function.

※1 AFC-544AKTSC is equipped with 4 buckles.

- ※2 17 fold patterns -- including 8-page cross fold, letter fold, and DL fold - are set by simply touching the icon for desired fold pattern and inputting the paper size on the large LCD touch-screen. ※3 12 different sections are set automatically by stepper motor.
- High production speed (belt speed 230 m (250 yd.)/min., 35,000 sheets/hr. (A4 / 8.5" x 11" -parallel fold), 43,000 sheets/hr. (A5 / 5.5" x 8.5" -parallel fold)).
- Optional extension table and suction head stay can be provided for gate folding operation.
- Advanced urethane foam (soft PU) rubber ensures accurate folding.
- The automated set-up takes just 14 seconds. The LCD touch-screen prompts the operator through all remaining settings, for fast, efficient production. All adjustments are user-friendly and require minimal skill or training.
- The AFC-544AKTSC/546AKTSC lets you memorize up to 100 different job settings, for quick and easy restart of regular jobs. In addition to sheet size, you can memorize belt speed, suction time, feed intervals, knife delay time, press stacker setting (option), and the date to store the job.
- The Operation Record Indicator provides complete system status at a glance.
- A wide range of optional accessories -- such as gate fold buckle, press stacker, edge-trim device, strip trim device, and gluing unit -- help you tackle a wide range of folding applications.
- Optional devices such as gate fold buckle and press stacker can be set-up and operated through the main LCD console on the AFC-544AKTSC/546AKTSC.
- The AFC-544AKTSC/546AKTSC can be enhanced with Horizon's unique ※4 i2i network flow system.

※2 14 fold patterns are set on the AFC-544AKTSC.
 ※3 10 sections are set on the AFC-544AKTSC.
 ※4 The i2i system is option.



※5 For AFC-546AKTSC Only

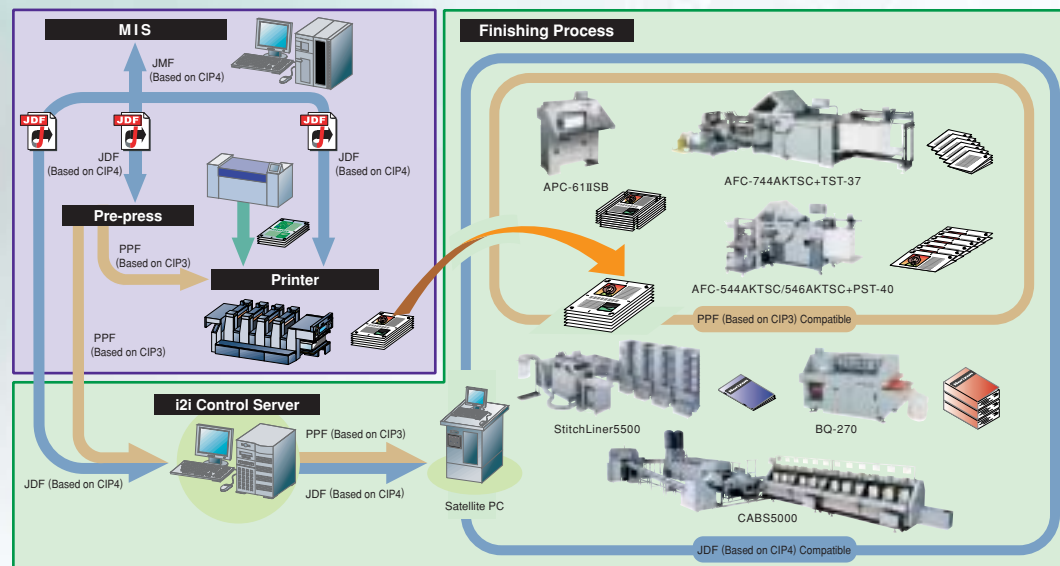


AFC-546AKTSC + PST-40 (Option)

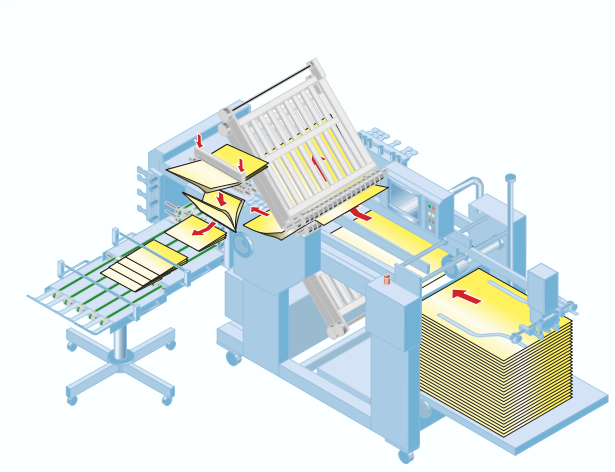
What is i2i System?



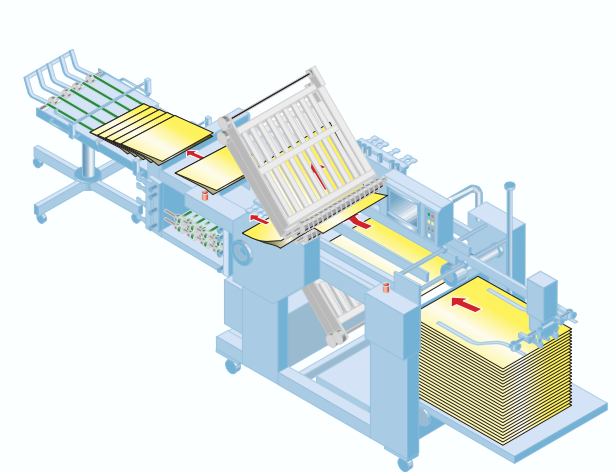
The Horizon i2i system can be integrated with pre-press and printing workflow to create a comprehensive automated CIP4 bindery with the prospect of jobs passing from the eye of the creator to the eye of the beholder in a single i2i Net>Work>Flow for ultimate flexibility and efficiency in the on-demand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



Sheet Flow with Cross Folding Operation



Sheet Flow with Parallel Folding Operation



The AFC-544AKTSC/546AKTSC computer controlled cross-folder is precision engineered for quality folding in minimum space.

The large icon-based touch-screen provides a simple, powerful user interface.

The AFC-544AKTSC/546AKTSC combines Horizon's advanced folding technology with simple operation and superior folding quality.

AUTO 1st to 6th Buckles ※2



- The specially-coated fold plate creates less friction with the paper to help maintain fold accuracy.
- The buckle section is set-up automatically by inputting the fold pattern and sheet size via the LCD touch-screen display.
- The buckle has a simple flip-over deflector.



Conveyor

- Conveyor height can be adjusted by the hand wheel to the proper sheet delivery height.

Sub-Operation Panel

- Basic operation- Start, Stop, Inching operation, and Test feeding are possible to perform.

AUTO Knife Stopper **AUTO** Two Knife Guides **AUTO** Two Buckles Below Knife

Fold Knife



- The servomotor-controlled knife can fold 24,000 sheets/hr.
- The feed interval is automatically set according to the knife delay time for maximum folding efficiency.
- The ability to inch the knife avoids trial-and-error test folding.

AUTO SHOWS AUTOMATED SET-UP SECTIONS.

A total of ※12 sections (※21st to 6th buckles; knife stopper, two knife guides, and two buckles below knife at the fold knife section; and side lay guide) are set-up automatically.

※1 A total of 10 sections are set automatically on the AFC-544AKTSC.
 ※2 The 1st to 4th buckles are set automatically on the AFC-544AKTSC.



Perforation



- The system supports perforation, slit perforation, scoring, slitting, and strip trimming.
- The perforation shaft is quick and easy to install or detach.
- 3 sets of cutter blade holders are provided standard. Three perforation and two scoring operations are possible. A maximum of 12 blades can be attached.

Folding Rollers



Helical gears driven with flexible cross couplings for quality fold.

- The uniquely designed combination of urethane foam (soft PU) rubber and steel rollers have superior grip for sharp, consistent paper folding.
- The fold roller system employs helical gears for quiet operation and flexible cross couplings for quality folding.
- The operator's screen indicates the required fold roller gap adjustment. The operator then simply inserts the indicated number of sheets.

LCD Touch-Screen



Roller Gap Set-up Screen Fold Pattern Set-up Screen

- The large LCD touch-screen is provided for operator convenience.
- The roller gap set-up screen indicates the number of sheets to be inserted for roller gap adjustment.
- ※3 17 fold patterns can be set-up on the fold pattern set-up screen.
- Fine-adjustments are simple and easy.
- Forward and reverse inching simplify jam clearance.

※3 14 fold patterns can be set-up on the AFC-544AKTSC.

Suction Head



- Two cylinder suction head system provides accurate sheet separation for high speed feeding.
- Innovative suction head allows smooth feeding without double feeding even with recycled papers.

Feed Rotor



- Suction angle can be adjusted for various sheet types.
- The feed rotor employs high quality polyurethane to prevent sheet scratching or glittering.
- Maximum feeding speed is 35,000 sheets/hr. (A4 / 8.5" x 11"-parallel fold) or 43,000 sheets/hr. (A5 / 5.5" x 8.5" -parallel fold).

AUTO Side Lay Guide

Side Lay Guide



- The side lay guide is coated with a special anti-static plating.

■ Gate Fold Buckle : GFB-54N



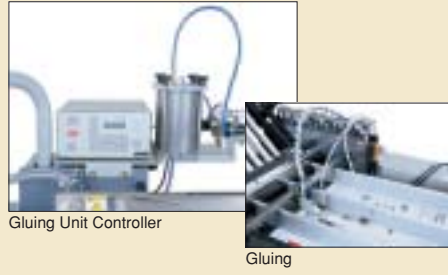
- The optional gate fold buckle provides for precise, accurate gate folding. The gate fold buckle can be set up quickly, with no special skill, and provides increased versatility and profitability.

■ Extension Table



- With the extension table and suction head stay, up to 1,100 mm (43.3") long sheet can be loaded for gate folding operation.

■ 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-ST5



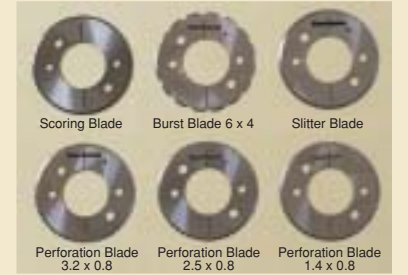
- Strip trimming is available for multiple-up jobs with slitter.

■ Center-Cut & Edge-Trim Device : CGU-T54



- The CGU-T54 can trim the edge of an 8-page or 12-page folded signature.

■ Blades



- A wide variety of optional blades are available for various applications, including slitter blades, different length perforation blades, and scoring blades.

■ i2i System

- The 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.

■ Short Conveyor : SCV-544

- ^{※4} The optional short conveyor is designed for limited space. The length is about two third of a standard conveyor.

※4 Machine Dimensions of the SCV-544 is described on the back page of this catalogue.

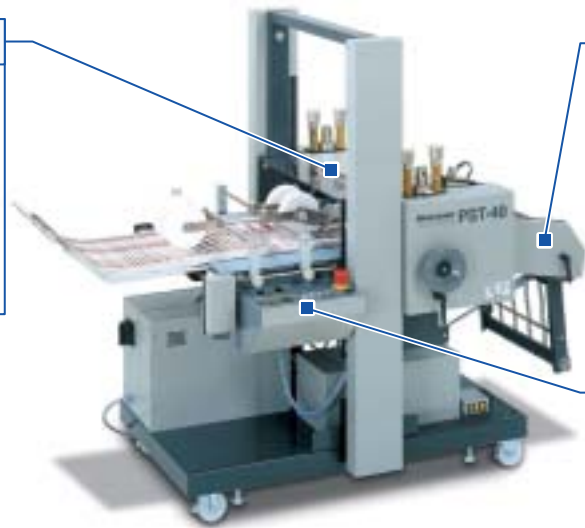
■ Press Stacker : PST-40

The PST-40 provides efficient folding operation.

- ◆ 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-544AKTSC/546AKTSC 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.

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

This unit presses and bundles each stack to eliminate time-consuming manual steps.

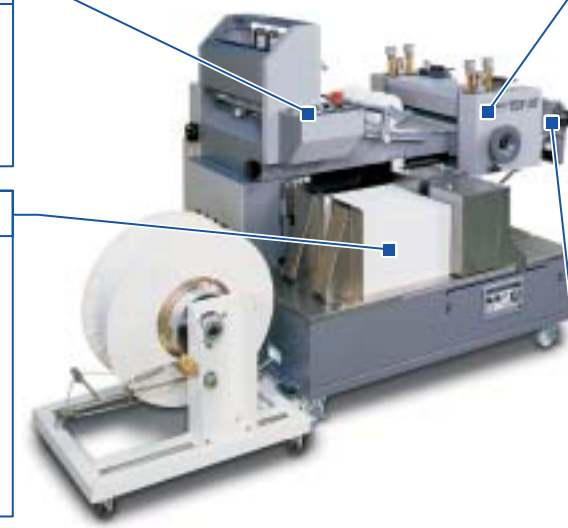
- ◆ The first rollers remove the air and the second rollers powerfully compress the signatures for reduced bulk and tighter folds.
- ◆ The TST-37 can be started or stopped from the AFC-544AKTSC/546AKTSC control console.
- ◆ The round belt change system at the in-feed section minimizes set-up time for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

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 16-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.

PST-40 Major Specifications

| Model | | Press Stacker | | Main Body Fixing Method | | 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 Single Phase 200 / 220 / 230 V, 50 / 60 Hz | | | |
| Offset | Number of Offset Sheets: 1 sheet per setting (0 to 9999 sheets) or All | | | Power Consumption 300 W, 50 Hz / 310 W, 60 Hz | | | |
| Press | Air Remove Roller: Gap is adjustable by inserting the instructed number of sheets. Press Roller: Pressure Welding (Gap is adjustable by inserting the instructed number of sheets.) | | | When Folded | 1,200(W) x 795(D) x 1,230(H) mm (47.3" x 31.3" x 48.5") | | |
| Conveyor | Model: Horizontal Delivery Conveyor Belt Speed: 0 to 12 m/min. (0" to 47.2"/min.) | | | When Operating | 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")] | | |
| In-feed Height | 400 to 950 mm (15.8" to 37.4") [Tilt Vertical Interval 240 mm (9.4")] | | | | 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")] | | |
| Main Body Lift | Moves up and down by a motor. | | | Machine Dimensions | | | |
| | | | | Machine Weight | 280 kg (617.4 lb.) | | |

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") Min. 210(W) x 140(L) mm (8.3" x 5.6") | | | Preset | | Preset number of sheets setting on the folder are transferred to the bundling section when operating with the folder. | |
| Production Speed | 10,000 sheets/hr. | | | Transfer to Bundling Section | | Operation: After arriving at set-up stack capacity, sheet feeding of the folder is stopped to transfer. | |
| Roller Speed | Max. 180 m/min. (708.7"/min.) | | | Compression Before Bundling | | Transfer Position: Folded sheets are automatically positioned at the center of the bundling section. | |
| In-feed Section | Belt Change System | | | Unit | | Compression Power: About 200 [N] (About 20 [Kgf]) | |
| Press | Air Remove Roller: Gap is adjustable by inserting the instructed number of sheets. Press Roller: Pressure Welding (Gap is adjustable by inserting the instructed number of sheets.) | | | Bundling | | Bundle: PP Band 12(W) mm (0.47") | |
| Conveyor | Operation: Intermittent operation only at in-feed time. Belt Speed: 0 to 12 m/min. (0" to 47.2"/min.) | | | Operation Panel | | Total Counter / Error Lamp (No wrapping paper, Conveyor motor lock, Mis-transfer to bundling section, Mis-compression before bundling) | |
| In-feed Height | 440 to 680 mm (17.4" to 26.7") | | | Voltage / Frequency | | 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") | | | Power Consumption | | 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 Dimensions | | [Separate Reel : 665 x 460 x 525 mm (26.2" x 18.2" x 20.7")] | |
| Stack Capacity | 600 sheets (64 gsm, 16-page cross fold) (With attachment : 150 sheets) | | | Machine Weight | | 370 kg (815.9 lb.) [Separate Reel : 30 kg (66.2 lb.)] | |

| AFC-544AKTSC/546AKTSC Major Specifications | | | |
|--|--|---|------------------------------|
| Machine Structure | AFC-544AKTSC | 4KTT (4 Buckles+Fold Knife+2 Buckles Below Knife) | |
| | AFC-546AKTSC | 6KTT (6 Buckles+Fold Knife+2 Buckles Below Knife) | |
| Max. Sheet Size | 540(W) x 750(L) mm (21.2" x 29.5") [1,100(L) mm (43.3") with optional extension table] | | |
| Min. Sheet Size | 128(W) x 148(L) mm (5.1" x 5.9") [Side Lay Guide Minimum Set Position : 74(W) mm (3.0")] | | |
| Sheet Weight Range | 35 to 220 gsm | | |
| Buckle Fold Length | AFC-544AKTSC | 1st Buckle | 30 to 450 mm (1.2" to 17.8") |
| | | 2nd to 4th Buckle | 30 to 360 mm (1.2" to 14.1") |
| | | K1 / K2 Buckle | 30 to 150 mm (1.2" to 5.9") |
| | AFC-546AKTSC | 1st Buckle | 30 to 450 mm (1.2" to 17.8") |
| | | 2nd to 6th Buckle | 30 to 360 mm (1.2" to 14.1") |
| | | K1 / K2 Buckle | 30 to 140 mm (1.2" to 5.5") |
| Knife Fold Size | Max. 540(W) x 350(L) mm (21.2" x 13.7") [Knife Length : 360 mm (14.1")] Min. 160(W) x 30(L) mm (6.3" x 1.2") [190(W) mm (7.5") with automatic set-up] | | |
| Feeding Mechanism | Air Suction Rotor & 2 Cylinder Separator Head (Feed interval and suction time are adjustable.) | | |
| Maximum Pile Height | AFC-544AKTSC | Max. 650 mm (25.5") [within 250 kg (551.3 lb.)] | |
| | AFC-546AKTSC | Max. 740 mm (29.1") [within 250 kg (551.3 lb.)] | |
| Belt Speed | 50 to 230 m (54 to 250 yd.)/min. [Knife Fold : 180 m (196 yd.)/min.] | | |
| Production Speed | 35,000 sheets/hr. [A4 (8.5" x 11")-Parallel Fold] 14,000 sheets/hr. [500(W) x 700(L) mm (19.7" x 27.6")-8-page Cross Fold] | | |
| Standard Fold Roller | Combination of Urethane Foam (soft PU) Rubber and Steel Roller Side cut blades can be attached to the roller. | | |
| Roller Gap Adjustment | Insert the instructed number of sheets into the gap adjust lever. | | |
| Bursting | Cut 6 mm (0.24"), Blank 4 mm (0.16") | | |
| Perforation | Cut 2.5 mm (0.1"), Blank 0.8 mm (0.03") [Option : Cut 3.2 mm (0.13"), Blank 0.8 mm (0.03") / Cut 1.4 mm (0.06"), Blank 0.8 mm (0.03")] | | |
| | Min. Perforation Distance : 40 mm (1.58") [Min. Distance from Sheet Edge : 12 mm (0.48")] | | |
| Scoring | Scoring Width : About 1 mm (0.04") (Depends on sheet type) | | |
| Cutters | Standard : 1 Burst Blade, 2 Perforation Blades / Max. 12 blades can be attached. | | |
| Automatic Setup | Side Lay Guide, 1st to 4th Buckle [AFC-544AKTSC] / 1st to 6th Buckle [AFC-546AKTSC], Knife Stopper, Knife Guide (Front / Rear), K1 / K2 Buckle Below Knife | | |
| Automatic Setup Accuracy | Setting Dimension : ±1 mm / Round Accuracy : ±0.1 mm | | |
| Deflectors | 1st to 4th Buckle | AFC-544AKTSC | Buckle Stopper and Deflector |
| | 1st to 6th Buckle | AFC-546AKTSC | Buckle Stopper and Deflector |
| | K1 / K2 Buckle (Below Knife) | Buckle Stopper and Deflector | |
| Fold Patterns | AFC-544AKTSC | 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 (Letter / Accordion), Zigzag Cross Fold, 16-page Transformation Fold | |
| | AFC-546AKTSC | Zigzag (6 panel) Fold, Zigzag (7 panel) Fold, Roll Fold, | |
| | AFC-546AKTSC Only | Zigzag (6 panel) Fold, Zigzag (7 panel) Fold, Roll Fold, | |
| Job Memory | 100 Jobs | | |
| Vacuum Pump | Flow | 40 m³/hr. | |
| | Voltage / Frequency | 3-Phase ∇ 230 / Y400 V ± 10 % 50 / 60 Hz | |
| | Power Consumption | 1.8 kW / 2.2 kW (50 / 60 Hz) | |
| Voltage / Frequency | 3-Phase 200 / 220 / 400 V, 50 / 60 Hz | | |
| Rated Current | AFC-544AKTSC | 3-Phase 200 V, 50 / 60 Hz, 9.8 A | |
| | | 3-Phase 220 V, 50 Hz, 10.0 A / 60 Hz, 11.3 A | |
| | | 3-Phase 400 V, 50 Hz, 5.3 A | |
| | AFC-546AKTSC | 3-Phase 200 V, 50 Hz, 9.0 A / 60 Hz, 11.4 A | |
| | | 3-Phase 220 V, 50 / 60 Hz, 8.6 A | |
| | | 3-Phase 400 V, 50 Hz, 5.0 A | |
| Power Consumption (Including Pump) | AFC-544AKTSC | 3-Phase 200 V, 50 Hz, 2.7 kW / 60 Hz, 3.1 kW | |
| | | 3-Phase 220 V, 50 Hz, 3.0 kW / 60 Hz, 3.8 kW | |
| | | 3-Phase 400 V, 50 Hz, 2.8 kW | |
| | AFC-546AKTSC | 3-Phase 200 V, 50 Hz, 2.7 kW / 60 Hz, 3.6 kW | |
| | | 3-Phase 220 V, 50 Hz, 2.8 kW / 60 Hz, 3.4 kW | |
| | | 3-Phase 400 V, 50 Hz, 2.8 kW | |
| Heat Output | 880 kcal | | |
| Motors | 0.75 kW x 1 / 0.2 kW x 2 / 40 W x 1 / 0.2 kW x 1 (Servo) | | |
| Machine Dimensions | AFC-544AKTSC | 2,735(W) x 1,005(D) x 1,535(H) mm (107.7" x 39.6" x 60.5") | |
| | AFC-546AKTSC | 2,780(W) x 1,005(D) x 1,662(H) mm (109.5" x 39.6" x 65.5") | |
| Installation Space | 5,100(W) x 3,709(D) mm (200.8" x 146.1") | | |
| Noise Level | 82 dB [Peak Level : 8-page cross fold with 700 x 550 mm (27.6" x 19.7"), 64 gsm sheet] | | |
| Machine Weight | AFC-544AKTSC | Main Body : 880 kg (1,940.4 lb.), Conveyor : 50 kg (110.3 lb.), Vacuum Pump : 50 kg (110.3 lb.), Transformer : 70 kg (154.4 lb.) | |
| | AFC-546AKTSC | Main Body : 940 kg (2,072.7 lb.), Conveyor : 50 kg (110.3 lb.), Vacuum Pump : 50 kg (110.3 lb.), Transformer : 70 kg (154.4 lb.) | |
| Temperature & Humidity | Temperature 0°C to +45°C, Humidity 20% to 75%RH | | |

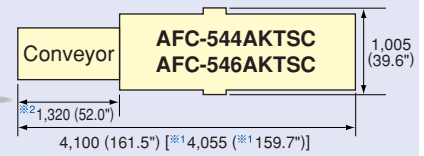
Machine Dimensions Unit : mm (inch)

Parallel Fold

Height = 1,662 (65.5") [※1,535 (※160.5")]



AFC-546AKTSC

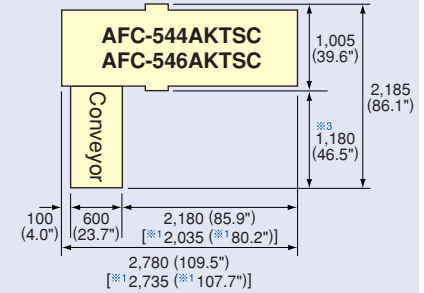


8-page Cross Fold

Height = 1,662 (65.5") [※1,535 (※160.5")]

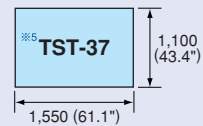
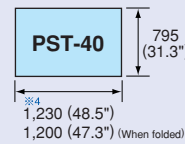


AFC-546AKTSC



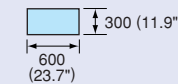
Height = 1,230 (48.5")

Height = 1,130 (44.5")



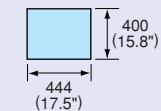
Vacuum Pump

Height = 400 (15.8")



Transformer

Height = 480 (18.9")



※1 Machine Dimensions for AFC-544AKTSC.

※2 Min. 630 mm (24.9") to Max. 860 mm (33.9") when connecting with the optional short conveyor SCV-544.

※3 Min. 480 mm (18.9") to Max. 710 mm (28.0") when connecting with the optional short conveyor SCV-544.

※4 Min. 1,230 mm (48.5") to Max. 1,540 mm (60.7") when connecting to the parallel folding exit section.

Min. 1,490 mm (58.7") to Max. 1,800 mm (70.9") when connecting to the cross folding exit section.

※5 The separate reel will be attached to the opposite side of the in-feed section.



Certified in Dec. 1997



Certified in Jan. 1999

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

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