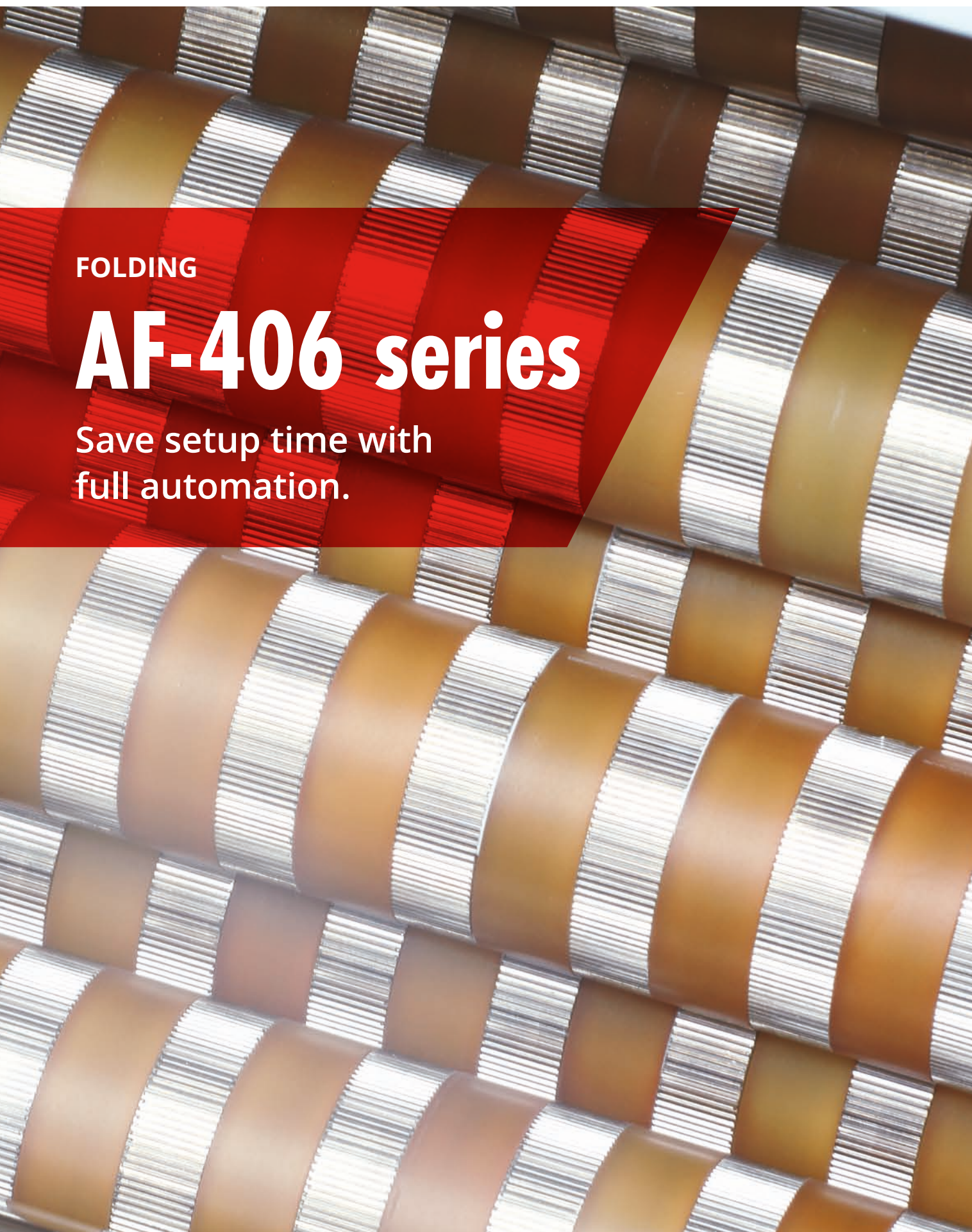


Horizon

FOLDING

AF-406 series

Save setup time with
full automation.



ADVANCED AUTOMATED FUNCTIONS.

Save setup time with minimal make-ready.

BENEFIT

ADVANCED AUTOMATION

Each section is set automatically by selecting the sheet size and fold pattern on the touchscreen. The advanced automated setup allows easy and quick changeover.

APPLICATION FLEXIBILITY

A selection of folding rollers are available to fold various type of sheets including thinner sheets for pharmaceutical. A double counter is provided at both the feeder and delivery sections. This facilitates jobs that require accurate counting control. Various optional devices including the Barcode Reader and Image Checking System are also available.

STABLE FEEDING

A superior suction feed system and feed table control provides stable feeding operation. The minimum sheet size is Width 50 mm x Length 100 mm / 1.970" x 3.940". The sheet size Width 50 mm x Length 60 mm / 1.970" x 2.362" can also be folded by using an optional device.

EASY SETUP

The scoring roller position navigator is equipped so that positioning of the scoring wheels are simple, fast and accurate. The delivery belt unit is movable for easy access and quicker adjustments. (This function is optional on the AF-406S.)

TIME SAVING

All the set up information can be stored in job memory for easy recall. Up to 200 jobs can be stored.

FOLD PATTERN FLEXIBILITY

6+6-buckle modular concept allows simple to complex fold patterns. Common fold patterns can be selected from the touchscreen for easy setup.

EXTEND SHEET LENGTH (FACTORY OPTION)

Extended table model is also available to feed sheet lengths up to 1,100mm / 43.310".

MANAGE YOUR BINDERY WITH PXNET

System can be enhanced with JDF workflow from upstream to postpress using the Horizon pXnet Bindery Control System.

WHAT'S THE DIFFERENCE?

AF-406F:

Fully automated folding machine.

AF-406S:

Semi automated folding machine.

Both machines are available as an L-version with long register table and feed table for feed sheet lengths up to 1,100 mm (AF-406FL and AF-406SL).

FEATURES		AF-406F/FL	AF-406S/SL
Feed Section	Suction Head Position Adjustment	Manual	Manual
	Table Guide	Automatic	Manual
Register Guide Section	Register Guide Position Adjustment	Automatic	Automatic
	Roller Gap Adjustment	Automatic	Manual
Folding Section	Buckle Chute Stopper Position	Automatic	Automatic
	Scoring Roller Position Navigator	Connectable	Optional
	2 nd Station	2 nd Station Register Guide Position	Automatic

COMBINATIONS 1 ST / 2 ND STATION		AF-406F/FL	AF-406S/SL	AF-406A*
2 nd Station	T-406F	Connectable	Not connectable	Not connectable
	T-406S	Connectable	Connectable	Connectable, requires to replace control software
	T-406A*	Connectable, requires upgrade to the control software and an optional connector relay box		-

* These machines are discontinued.

FLEXIBLE MODULAR CONCEPT INCREASES FOLDING CAPABILITIES

STAND-ALONE 6-BUCKLE

Stand-alone 6-buckle configuration for brochure or leaflet folding.



Configuration: AF-406F+SCV-406
(with optional long table)

RIGHT ANGLE 6+6 BUCKLE

6+6 buckle modular system with the right angle conveyor for pharmaceutical, small format, and direct mail applications. This configuration also allows scoring on the first station and folding on the second station for heavier weight stocks.



Configuration: AF-406F+T-406F+SCV-406
(with optional long table)

STRAIGHT 6+6-BUCKLE

Straight 6+6-buckle modular system for zigzag fold (up to 10 panel) operation. Complex fold patterns can be performed using this configuration.



Configuration: AF-406F+T-406F+SCV-406
(with optional long table)

REGISTER TABLE - LONG TYPE

The 1,100 mm long register table and feed table of AF-406FL and AF-406SL enables to fold the large-sized sheet accurately.



Configuration: AF-406FL+T-406F+SCV-406

DETAILS FOR EACH SECTION.

From feed to finish.

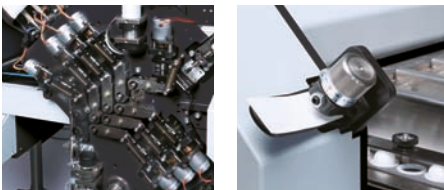
1 CONTROL PANEL



Each section of the AF-406T6F is set automatically by selecting the sheet size and fold pattern on the LCD touchscreen. The roller gaps are adjusted by 0.005 mm and the buckle chute stopper can be adjusted by 0.1 mm / 0.005" using the touchscreen.

Roller Gaps (406F AUTO)

All fold roller gaps are calculated and set automatically by inserting just one sheet strip into the sheet thickness detector. Since the roller gaps are set automatically according to the fold patterns, you do not need to insert strips one by one for each gap.



2 SUCTION HEAD / SIDE AIR

Table guide (406F AUTO)

An innovative new suction head design increases durability. Improved feed table control enables stable feeding even for very small size stacks. Easy air adjustment provides smooth feeding of various paper stocks. Side air is employed for fast, consistent feeding

3 FEED ROTOR



Quality polyurethane rotor provides high speed feeding without scratching. Feed timing and feed interval can be adjusted through the touchscreen. For small size stacks, the feeding operation can be done using only the feed rotor.

Supersonic Sensor

The ultra sonic sensor comes standard on the AF-406F for reliable double feed detection regardless of the printed image, such as solid black print.

(This feature is for the AF-406F/FL only)



4 REGISTER GUIDE



Register Guide Position (406F/S AUTO)

The register guide is coated with a special anti-static plating. Uniquely designed rigid register guide ensures accurate and smooth transportation of a wide range of paper stocks. Superior sheet aligning capability ensures consistent and accurate folding.

5 BUCKLE



Buckle plate position (406F/S AUTO)

Specially-coated buckle plates minimize paper friction to maintain fold accuracy. All the buckles are set up automatically with precise stepper motor drives for the sheet size and fold pattern selected. Each buckle has an integrated deflector/stopper.







Configuration: AF-406FL+T-406F+SCV-406

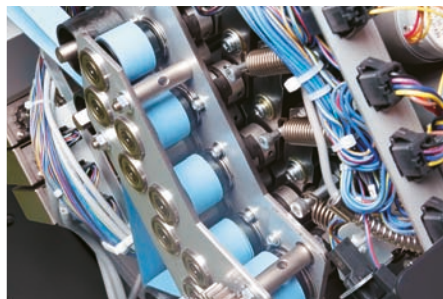
6 FOLD ROLLERS

Three kinds of fold rollers are available for selection depending on the application.

FOLDING ROLLER SELECTIONS

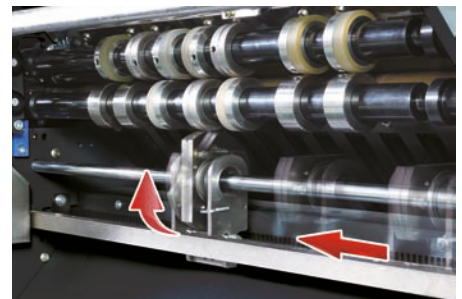
Name	RL-406S	RL-406-H1
Description	Soft urethane roller (Segmented)	Hard urethane roller (Segmented)
Feature	 <p>Regular fold roller for easy set up</p>	 <p>Higher durability, grip, and roller gap setting is more controlled</p>
Name	RL-406H2	RL-406H3
Description	Hard urethane roller (Full length urethane)	Hard urethane roller (Segmented full length urethane)
Feature	 <p>Suitable for thinner sheet with increased accuracy. Roller gap setting is critical.</p>	 <p>Suitable for thinner sheet with increased accuracy. Roller gap setting is critical.</p>

7 FOLD ROLLER DRIVE



Flexible cross couplings are employed for consistent drive of the fold rollers -- even with thick paper or complex folds -- and accurate folding performance over a long machine life. Horizon's unique belt drive system provides reliable, quiet operation.

8 SCORE NAVIGATOR



(406F AUTO)

Scoring can be positioned easily using the uniquely designed scoring navigator. The position can be saved in a job memory for easy recall of repeated jobs.

(The navigator can be mounted on the AF-406S/SL as an optional device - factory option).

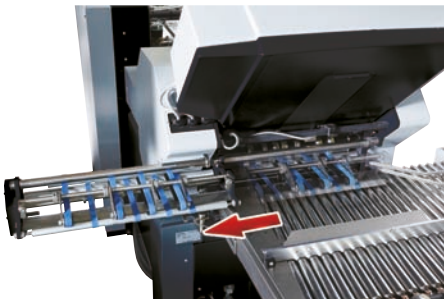
DETAILS FOR EACH SECTION.

From feed to finish.



Configuration: AF-406FL+T-406F+SCV-406

9 DELIVERY BELT UNIT



Uniquely designed delivery belt unit can slide out for easy set up of scoring and perforating positions.

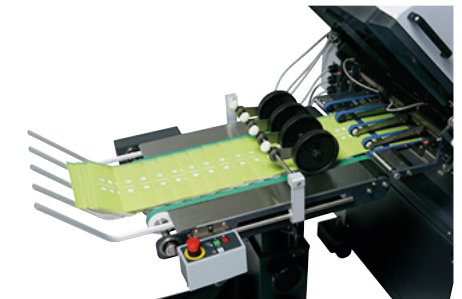
10 RIGHT ANGLE CONVEYOR



Connected to the first station at a right angle, 6+6-buckle modular allows complex folding such as pharmaceutical folds and DL folds.

The register guide is set automatically according to the sheet width.

11 DELIVERY CONVEYOR



SCV-406

Delivery Conveyor: SCV-406 (Optional)

Conveyor height is easily adjusted by the handwheel to the proper sheet delivery height.

OPTIONS.

Add-on systems.

| PST-66 / PST-44 / PST-44L PRESS STACKER

- First roller removes air between sheets and the second roller presses the sheets tightly to compress the booklets with 12,000N / 4,000N pressure for the PST-66 and PST-44/44L respectively.



| PSX-56/56R PRESS STACKER WITH PILE DELIVERY

- Stacked signatures or booklets are delivered to a comfortable height for easy off-loading and handling. Applications can be stacked 1-up, 2-up or 3-up for efficient production. Rigid, large diameter rollers apply 1.2 tons.



| MKU-54T MOBILE KNIFE FOLD UNIT

- The MKU-54T is a mobile knife unit equipped with fold plates below the knife. It is capable of a letter fold after 8-page cross fold.



| MKU-38 MOBILE KNIFE UNIT

- The MKU-38 can be connected with various folders as an additional knife unit. A wide range of applications are covered with a sheet size of 90 mm / 3.54" to 380 mm / 14.96".



OPTIONS.

Add-on systems.

PR-40S PRESS ROLLER UNIT

- Strong and rigid press roller presses the folded sheets to form crisp and tight folds. Tight folded sheets minimize shipping costs by reducing packaging.

ED-40S STANDING DELIVERY

- Standing delivery stacker increases the efficiency for sheet packing. Batch kicking function allows accurate counting.



ED-40S Standing Delivery

PR-40S Press Roller Unit

KTU-40 MOBILE KNIFE UNIT

- A broad range of applications can be performed with the mobile knife unit. Both right angle and parallel direction can be processed depending on folding patterns.

*Optional conveyor KTU-PL is required for parallel configuration. Standing delivery is equipped as standard for easy handling of folded sheets. Buckle below knife can be set for greater application flexibility



CONNECTABLE DOWNSTREAM DEVICES FOR THE 406F/FL, 406S/SL

Folder	Press Roller Unit	Standing Delivery	Connection	BG-40S
AF-406F *1 AF-406FL *1 AF-406S *1 AF-406SL *1 T-406F *2 T-406S *2	PR-40 *3	/	Connectable	Necessary
		ED-40 *3	Connectable	Necessary
		ED-40S	Not Connectable	/
	PR-40S	/	Connectable	Not Necessary
		ED-40 *3	Not Connectable	/
		ED-40S	Connectable	Not Necessary
		ED-40 *3	Connectable	Necessary
		ED-40S	Connectable	Not Necessary
Folder	Fold Knife Unit	Connection	BG-40S	
AF-406F *1 AF-406FL *1 AF-406S *1 AF-406SL *1 T-406F *2 T-406S *2	KTU-40	Connectable	Necessary	
	MKU-38	Connectable	Not Necessary	

*1: The BG-40S is not supplied with the AF-406F and AF-406S.

*2: The BG-40S is supplied with the T-406F and T-406S.

*3: These machines are discontinued.

CONNECTABLE DOWNSTREAM DEVICES FOR THE 406A

Folder	Press Roller Unit	Standing Delivery	Connection	BG-406
AF-406A *3 T-406A *3	PR-40 *3	/	Connectable	Necessary
		ED-40 *3	Connectable	Necessary
		ED-40S	Not Connectable	/
	PR-40S	/	Connectable	Not Necessary
		ED-40 *3	Not Connectable	/
		ED-40S	Connectable	Necessary
		ED-40 *3	Connectable	Not Necessary *4
		ED-40S	Connectable	Not Necessary
Folder	Fold Knife Unit	Connection	BG-406	
AF-406A *3 T-406A *3	KTU-40	Connectable	Necessary	
	MKU-38	Connectable	Necessary	

*3: These machines are discontinued.

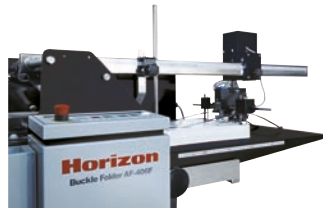
*4: The operation is improved by connecting the BG-406.

OPTIONS.

Performance Enhancing Options.

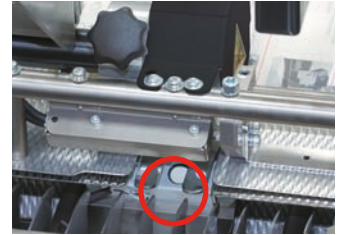
| LT-40S LONG TABLE

- The long table allows to feed the sheet up to 900 mm / 35.5".



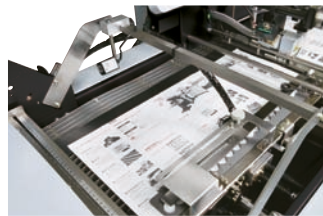
| ULTRASONIC SENSOR

- The optional ultrasonic sensor can be used as the double feed detection sensor. This detects the space between sheets for accurate double feed detection.: LT-40S



| BARCODE READER

- High performance barcode reader, reads and compare the code to avoid error.



| WATER SCORING UNIT

- The water scoring unit applies the water (mixed with alcohol) along the fold line at the register table. This enables the fold edge to be tightly pressed to improve the fold accuracy and quality. The fold rollers on the folder are rust-proof.



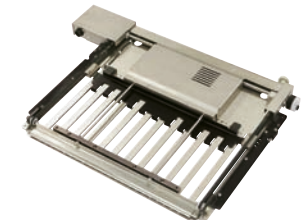
| LB-40S LONG BUCKLE CHUTE

- The maximum length of the fold is 430 mm / 13.78".



| GFB-40 LONG BUCKLE CHUTE

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



| RB-40 REVERSING BUCKLE

- Provides versatility in folding pattern and imposition by reversing the sheet direction.



| AD-40S ALIGNMENT DETECTOR

- This detects the unfolded signatures or transport error to prevent the sheet jam.



| FABOX-40S INTERFACE UNIT

- Interface unit to connect T-406A with AF-406F/FL and AF-406S/SL.

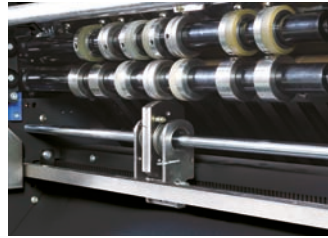


OPTIONS.

Performance Enhancing Options.

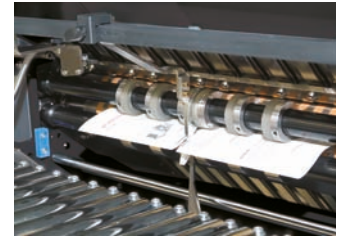
| SN-40S SCORING NAVIGATOR

- The scoring position can be adjusted by unit of 0.1 mm using the scoring navigator. This navigator also can read the scoring position and that position can be saved as a memory. (The scoring navigator can be installed to the AF-406S/SL with the factory option.)



| AF-ST4S STRIP TRIM UNIT

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



| AF-ET4S EDGE TRIM UNIT

- The both edges of folded sheets can be trimmed using the edge trim unit.



| BLADES

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



Unit: mm (Cut x Blank)

SPECIFICATIONS.

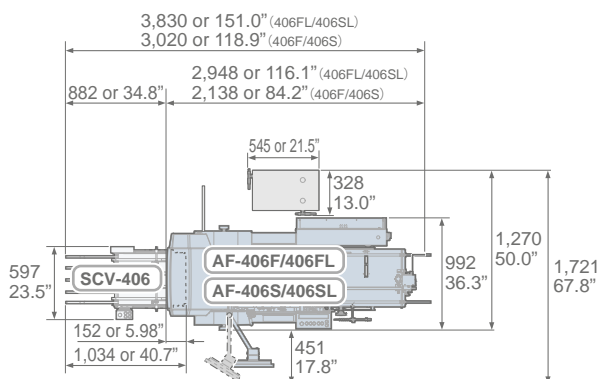
Machine Dimensions.

(Unit: mm or inch)

- Provide 700 mm or 27.6" of working space around the machine.

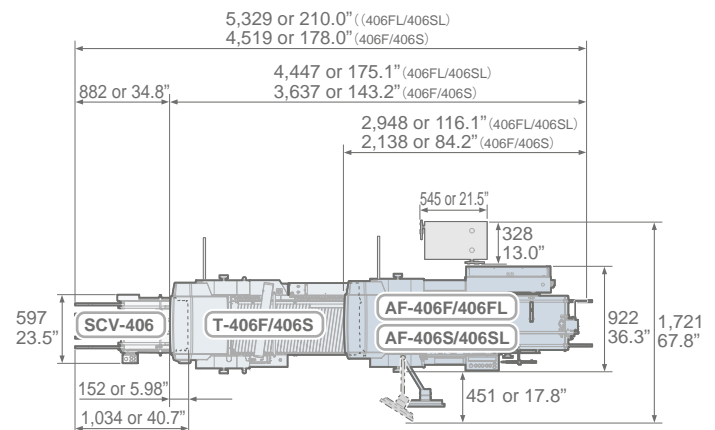
STAND-ALONE 6-BUCKLE

The optional long table is attached to the machine in the picture, however, the dimension shows the size of the standard table.



STRAIGHT 6+6-BUCKLE

The optional long table is attached to the machine in the picture, however, the dimension shows the size of the standard table.



SPECIFICATIONS.

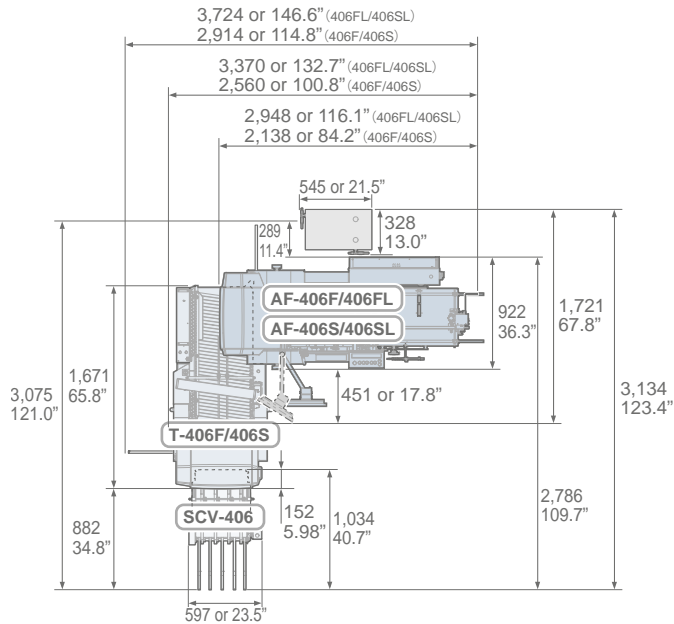
Machine Dimensions.

(Unit: mm or inch)

- Provide 700 mm or 27.6" of working space around the machine.

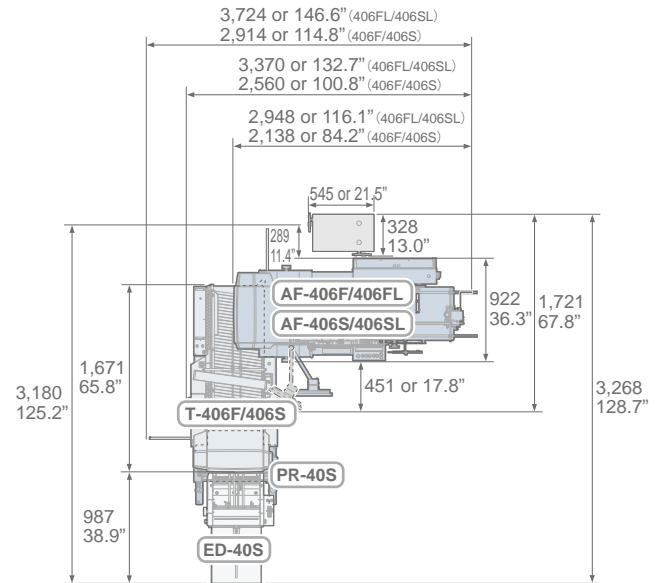
RIGHT ANGLE 6+6 BUCKLE

The optional long table is attached to the machine in the picture, however, the dimension shows the size of the standard table.



EXTENDED WITH OPTIONAL DEVICE


The optional long table is attached to the machine in the picture, however, the dimension shows the size of the standard table.



AF-406F/FL, AF-406S/SL SPECIFICATIONS

Machine Structure	6 Buckles / 6 Buckles	
Sheet Size	Width x Length	Max. 430 mm x 660 mm or 16.92" x 25.98" Up to 900 mm with optional device LT-40S, Up to 1,100 mm with AF-406FL/SL.
		Min. 50 mm x 100 mm or 1.97" x 3.94" Up to 60 mm with optional device
Length of Register Guide	AF-406F, AF406S: 740 mm or 29.1" AF-406FL, AF406SL: 1,100 mm or 43.31"	
Sheet Weight Range	Uncoated Paper 33 to 157 gsm Coated Paper 73 to 157 gsm	
Belt Speed	30 to 180 meters per minute or 98 to 590 feet per minute	
Production Speed	Suction Head 30,000 cycles per hour	
Buckle Fold Length	1st Station (AF-406F/FL, AF-406S/SL)	1st Buckle Chute: 20 to 350 mm or 0.79" to 13.77" (20 to 430 mm or 0.79" to 16.92" with optional LB-40S)
		3rd / 5th Buckle Chute: 20 to 350 mm or 0.79" to 13.77"
		2nd / 4th / 6th Buckle Chute: 20 to 280 mm or 0.79" to 11.02"
	2nd Station (T-406F / 406S)	1st to 6th Buckle Chute: 20 to 280 mm or 0.79" to 11.02"
Vacuum Pump	Standard	
Voltage/Frequency	1st Station	3-phase 200 to 220 V, 50 or 60 Hz Single Phase 220 to 240 V, 50 or 60 Hz
	2nd Station	Single Phase 220 to 240 V, 50 or 60 Hz
Machine Dimensions	1st Station	AF-406F / 406S: W2,138 x D922 x H1,457 mm or W84.2" x D36.3" x H57.4"
	2nd Station	AF-406FL / 406SL: W2,938 x D922 x H1,457 mm or W115.7" x D36.3" x H57.4" T-406F / 406S: W1,671 x D858 x H1,285 mm or W65.8" x D33.8" x H50.6"

PR-40S SPECIFICATIONS

Signature Size		Maximum Width 400 mm or 15.74" Minimum Width 30 mm or 1.19" Minimum Length 25 mm or 0.99"
		*Note that even if the minimum length is 25mm or 0.99" or above, depending on the opening amount of the signatures, the signatures can sometimes not be transported or delivered between the upstream/downstream devices.
Thickness of Folded Piece	Max. 3 mm or 0.12"	
Belt Speed	30 to 180 meters per minute	
Offset Amount	Press Roller x 1	
Voltage/Frequency	Single Phase 200 to 240V, 50 or 60 Hz	
Machine Dimensions	W791 x D657 x H1,066 mm or W31.2" x D25.9" x H42.0"	

ED-40S SPECIFICATIONS

Signature Size		Maximum Width 400 mm or 15.74" Maximum Height 150 mm or 5.90" Minimum Width 30 mm or 1.19" Minimum Height 20 mm or 0.79"
		*Note that even if the minimum height is 20mm or 0.79" or above, depending on the opening amount of the signatures, the signatures can sometimes not be transported or delivered between the upstream device and the ED-40S.
Thickness of Folded Piece	Max. 3 mm or 0.12"	
Stack Capacity	Max. 395 mm or 15.55" Min. 5 mm or 0.20"	
Belt Speed	30 to 160 meters per minute	
Offset Amount	Minimum Offset: Five sheets	
Voltage/Frequency	Single Phase 200 to 240V, 50 or 60 Hz	
Machine Dimensions	W982 x D624 x H1,153 mm or W38.7" x D24.6" x H45.4"	

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

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