GRAPHTEC

Cutting Plotter

FC8600 60/75/100/130/160 series NEW

FC8600-160

FC8600-130

FC8600-100

FC8600-75

FC8600-60

New Feature

Software
Including improved design application software (Graphtec Studio) and plug-in software for Illustrator and CorelDRAW (Cutting Master 3)

ARMS5.0
Enhanced ARMS, improved precision cutting and productivity in Print & Cut application

Network Interface
Built-in Ethernet (10BASE-T/100BASE-TX), ease of use in networked environments

Best performing Cutter in its class

FC8600 series premiere cutting plotter providing higher productivity and greater ease of use

Fastest cutting speed in its class
1485 mm/s maximum cutting speed for the higher productivity.

Highest cutting force in its class
5.88 N (600 gf) maximum cutting force for a wide variety of applications. Expands the range of possible cutting media such as thick film.

Reliable long-length tracking
Guaranteed 15m tracking and accuracy.*1
Includes basket and push rollers with 3 different pressure settings*2 to provide a more stable media feed and to support a wider range of media.

*1: Operated with Graphtec specified media and conditions.
*2: The center push rollers have 3 pressure settings, the end push rollers have two pressure settings

Five sizes to match all requirements
The series includes cutting widths of 61 cm (24 in.) to 162 cm (64 in.).

Model	Width
FC8600-160	162cm (64 in.)
FC8600-130	137cm (54 in.)
FC8600-100	106cm
FC8600-75	(30 in.)
FC8600-60	cm (24 in.)

Labels/Stickers
(Print & Cut in small size)

Apparel pattern paper

Window display
(Indoor and outdoor signage)

Window display with graphics
(Print & Cut in large size)

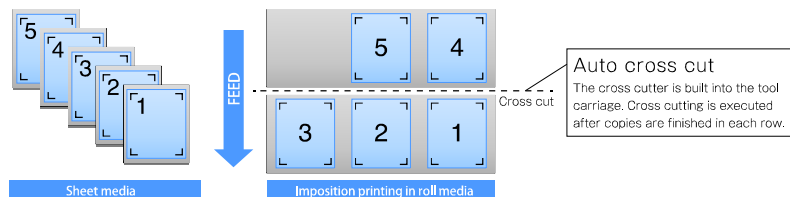Traffic sign
(High-intensity reflective film)*
*Using cutting blade CB15UA or CB15UA-K30 is recommended. In some grades of reflective film, reinforcing the backing sheet of the media is recommended.

Enhanced functions for higher productivity

Copy with ARMS `NEW`
The new fifth generation ARMS5.0 provides high-precision print & cut.
It supports the copying of the cutting data including the ARMS control command for making multiple copies of the downloaded data. This allows multiple copies to be created without a PC, significantly improving work efficiency. The media can be also separated by each row with the cross cutter when the cross cut function is enabled.

FEED

Sheet media

Imposition printing in roll media

Cross cut

Auto cross cut
The cross cutter is built into the tool carriage. Cross cutting is executed after copies are finished in each row.

Built-in network interface `NEW`
The USB 2.0 (Full Speed), RS-232C and Ethernet (10BASE-T/100BASE-TX) are built in as standard. Multiple interfaces enable various connections such as a single PC to single plotter and multiple PCs to multiple plotters. The Ethernet connection also allows sharing of the cutter over a network.

Improved application software

Included software `NEW`
Plug-in software for Illustrator & CorelDRAW
Cutting Master 3

This plug-in software sends the cutting object created by the Illustrator or CorelDRAW to the plotter, and can also be used to control the plotter. It has a variety of features such as registration mark creation, matrix copy, tiling, weed settings, tool conditions, cut job settings, and others. It is easy to use and enables you to get the best performance from your plotter.
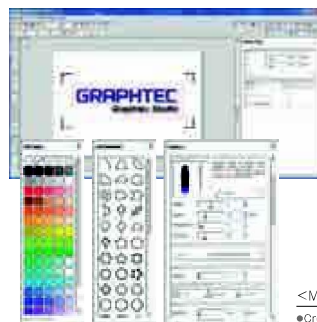
<Main Features>
● Editing the position, enlarging and reducing the graphic directly within the preview windows
● Creating an outline of a letter, recognising a line width and the overlap
● Output by a layer or colour, and inserting a line for weeding (horizontal, vertical)
● Splits an object into small pieces with the tiling function
● Supports the connection and switching of multiple plotters

Supported OS*	Windows8 / 7 / Vista /XP Mac OS X 10.5.8 to 10.8
Supported software*	Illustrator CS6/CS5/CS4 CorelDRAW X6/X5/X4

Included software `NEW`
Design application software
Graphtec Studio

This is an easy-to-use application software for creating original designs. It has enhanced features such as auto-shapes, shading, and editing functions. It can also configure the cutting conditions and other functions on the plotter.

Supported OS*	Windows8 / 7 / Vista /XP Mac OS X 10.5.8 to 10.8

<Main Features>
● Creating designs using autoshape, various line type, and others
● Editing text using rotate, mirror, fit-to-shape, and outline
● Autotrace (supporting bmp, tiff, jpeg, etc. image format)
● Supports the connection and switching of multiple plotters

*For more information about compatibility of the OS or application software, please check the Graphtec website or contact your local representative of Graphtec.
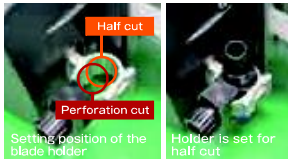
Enhanced functions for high productivity

Intuitive operation

Settings can be easily set up using the large 3-inch LCD and tactile control panel. It is icon driven and supports multiple languages.
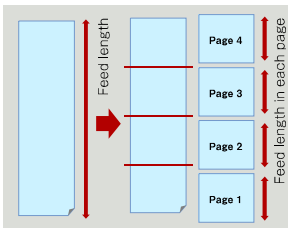
Perforation Cutting

Perforation cutting is performed by controlling the cutting force instead of blade up/down movements, increasing throughput. This is perfect for cutting separation lines for tearing out labels, fold lines for POP signs, and others.
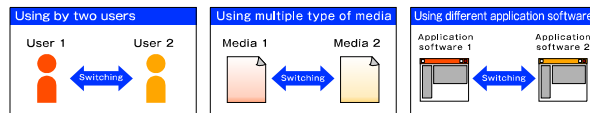
Half cut

Perforation cut

Setting position of the blade holder

Holder is set for half cut

Auto-paneling

Auto-paneling is a new feature that automatically splits long-length jobs into smaller pages that are cut sequentially but without any gaps. The result is a seamless, long-length finished job. Media movement is limited to the smaller page being cut, improving accuracy and tracking.

Feed length

Feed length in each page

Page 4
Page 3
Page 2
Page 1

Dual configuration

Save two (2) user settings with eight (8) condition settings for each user. A fast access key allows quick switching between users. One cutter can be shared by multiple users or for multiple purposes.

Using by two users
User 1   User 2
Switching

Using multiple type of media
Media 1   Media 2
Switching

Using different application software
Application software 1   Application software 2
Switching

2 tool configuration for cutting & plotting (Option)

It holds both a pen for plotting and a blade for perforated cutting. The tool is automatically switched for cutting and plotting as needed.

● The media stocker can be added for storing multiple roll media (Option, up to three)

● The media can be loaded from the rear or front by changing the direction of the stand

Plotter control software   Included software

Plotter Controller

This software can control various settings of the FC8600 from the PC, improving work and operating efficiency. This controller can be started from the plotter driver when the print operation is executed by the print menu of the application software. It can be run concurrently with the design software so the design and cutter control windows are open to smoothly run a series of tasks from image design to cutting media.

<Main Features>
● Configuring the cutting conditions
● Test cut   ● Setting and executing the ARMS
● Rotation of data (to match the direction of loaded media)
● Moving the tool position   ● Setting the origin point
● Operation with the short-cut keys

Supported OS*2 | Windows8 / 7 / Vista / XP

Cutting Master 2 *1

Supported OS*2		Windows 8 / 7 / Vista / XP / 2000
		Mac OS X 10.2 to 10.7 (Classic mode is not supported)
Supported software*2	Win	Adobe Illustrator (8 to CS5) CorelDRAW (10 to X5)
	Mac	Adobe Illustrator (10 to CS5)

This plug-in software for the Illustrator and CorelDRAW sends the cutting object created by the software to the cutting plotter, and can also be used to control the plotter.

*1: It can be downloaded from the Graphtec website. The expanded effective cutting area for ARMS is not supported.
*2: For more information about compatibility of the OS or software, please check the Graphtec website or contact your local representative of Graphtec.
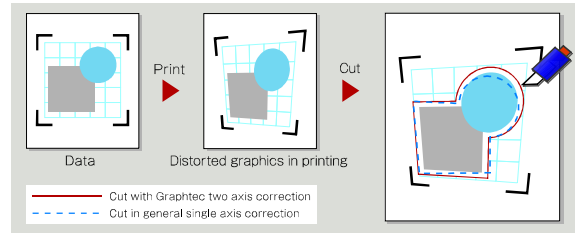
Improved ARMS 5.0 for high precision cutting

ARMS
Advanced Registration Mark Sensing System

[4] 4-point axis alignment

This feature compensates for any direction on the X-axis and Y-axis using sophisticated fifth-generation algorithms. This leads to more accurate registration and improves the reliability and quality of Print & Cut.

Data   Print   Distorted graphics in printing   Cut

——— Cut with Graphtec two axis correction
- - - - - Cut in general single axis correction
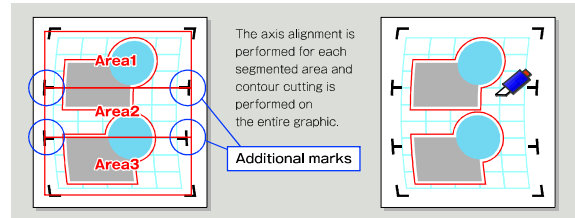
[M] Multiple-mark compensation

When the design is printed with the matrix copy function, the action of reading the marks and contour cutting is repeated for each copy. It significantly improve productivity for Print & Cut.

* This function is available when the Graphtec Studio, Cutting Master 3 or Cutting Master 2 software is used.

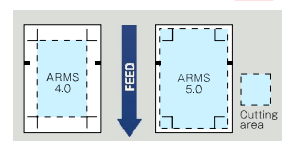### [A] Segment area compensation

The 4-point axis alignment is performed for each segmented area. This is performed by reading the mark in the middle of the feeding direction and provides high-precision alignment for long length Print & Cut applications.

* This function is available when the Graphtec Studio, Cutting Master 3 or Cutting Master 2 software is used.
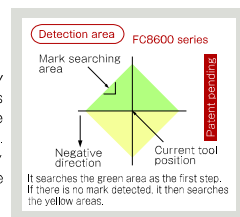
Area1
Area2
Area3

The axis alignment is performed for each segmented area and contour cutting is performed on the entire graphic.

Additional marks

[new icon] Expanded effective cutting area NEW

The new ARMS 5.0 expands the cutting area to include the area outside the registration marks. This increases the production efficiency by reducing media waste.

ARMS 4.0   FEED   ARMS 5.0   Cutting area

[auto] Auto mark detection NEW

The first registration mark is automatically detected within a wide search area; this eliminates the need to manually move the sensor near the registration mark position. Subsequent marks are automatically located which improves the operation of the registration mark searching.

Detection area   FC8600 series
Mark searching area
Patent pending
Negative direction   Current tool position
It searches the green area as the first step. If there is no mark detected, it then searches the yellow areas.

[Sensitivity Adjust] Auto sensitivity adjust

The sensitivity of the registration mark sensor is automatically set by measuring the reflective level of the mark and the background of the actual media. The mark can be detected when the colour of the mark has a reasonable contrast against the background. For example, a white mark can also be detected on a coloured background.

[icon] Supports ARMS commands

The special command for controlling the registration mark sensing system (ARMS) is also supported. The setting parameter for ARMS can be set from the PC using the software.

Cutting Master 2 / Cutting Master 3
Graphtec Studio / Plotter Controller

Specifications

Model	FC8600-60	FC8600-75	FC8600-100	FC8600-130	FC8600-160
CPU	32-bit CPU				
Configuration	Grit rolling type				
Drive method	Digital servo drive				
Maximun cutting area (W x L) *1	610 mm x 50 m	762 mm x 50 m	1067 mm x 50 m	1372 mm x 50 m	1626 mm x 50 m
Cutting area of guaranteed accuracy *2	590 mm x 15 m	742 mm x 15 m	1043 mm x 10 m, 894 mm x 15m	1342 mm x 10 m, 894 mm x 15 m	1603 mm x 10 m, 894 mm x 15 m
Mountable media width — Minimum	50 mm				
Mountable media width — Maximum	770 mm	920 mm	1224 mm	1529 mm	1850 mm
Maximum cross cut width	734 mm	886 mm	1191 mm	1496 mm	1750 mm
Number of push rollers	2 rollers	2 rollers	3 rollers	3 rollers	4 rollers
Maximum cutting speed	1485 mm/s at 45º direction				
Axial acceleration	Max. 39.2 m/s^2 (4 G) in 8 steps				
Cutting force	Max. 5.88 N (600 gf) in 48 steps				
Mechanical resolution	0.005 mm				
Programmable resolution	GP-GL: 0.1 / 0.05 / 0.025 / 0.01 mm, HP-GL^{TM}: 0.025 mm				
Distance accuracy *2	Max. 0.1 mm or 0.1 % of plotted length				
Repeatability *2	Max. 0.1 mm in plot up to 2 m (excluding the expansion and contraction of the media)				
Minimum character size	Approx. 3 mm alphanumeric (varies depending on character font and media)				
Mountable number of tools	1 tool (cutting blade, plotting pen or pouncing tool) in standard; 2 tools (cutting blade and plotting pen) when second penholder (optional) is installed				
Blade types	Supersteel (0.9 mm or 1.5 mm diameter)				
Pen types	Water-based fiber-tip pen, Oil-based ballpoint pen				
Pouncing tool type	Steel pin 1.2 mm diameter, required optional pouncing tool (PPA 33-TP12)				
Media types *3	Self-adhesive marking film (vinyl, fluorescent, reflective, high-intensity reflective film) up to 0.25 mm thick, Sandblast resist rubber up to 1 mm thick				
Compatible paper for pouncing	Regular paper from 0.06 to 0.13 mm thick				
Light pointer	Built into the tool carriage				
Cross-cutter	Built into the tool carriage				
Perforation cutting	Supported (performed by force control)				
Registration mark sensing system	Scans the mark by optical sensor (ARMS5.0), Segment area and Multiple-mark compensation, 4-points axis alignment, Auto mark detect				
Standard interface	USB2.0 (Full speed), RS-232C, and Ethernet (10BASE-T/100BASE-TX)				
Buffer memory	2 MB				
Command sets	GP-GL / HP-GL^{TM} emulation (Set by menu or command, and selects from GP-GL, HP-GLTM, or Auto select)				
Condition settings	Dual configuration (save two (2) user settings with eight (8) separate condition setting for each user)				
Display	Graphic type LCD (3-inch, backlight)				
Power source	100 V to 240 V AC, 50 / 60 Hz				
Power consumption	Max. 160 VA				
Operating environment	10 to 35 ºC, 35 to 75 % R.H. (non-condensing)				
Guaranteed accuracy environment	16 to 32 º3C, 35 to 70 % R.H. (non-condensing)				
External dimensions (W x D x H) (approx.)	1128 x 715 x 1219 mm	1278 x 715 x 1219 mm	1578 x 715 x 1219 mm	1878 x 715 x 1219 mm	2138 x 715 x 1219 mm
Weight (approx.)	38 kg including stand	42 kg including stand	46 kg including stand	54 kg including stand	59 kg including stand
Included software *4	Windows driver, Plotter controller, Graphtec Studio, and Cutting Master 3				
Compatible OS *4	Windows 8 (8 / Pro / Enterprise) Windows 7 (Ultimate / Enterprise / Professional / Home Premium) Windows Vista (Ultimate / Enterprise / Business / Home Premium / Home Basic) Windows XP (Professional / Home Edition) Macintosh OS 10.5.8 to 10.8				
Compatible Standards — Safety	UL60950-1, cUL, CE mark (Low voltage and EMC), KC mark (Low voltage and EMC)				
Compatible Standards — EMC	FCC-A, EN55022-A				

*1 When the 2nd pen holder is installed, the maximum cutting width is changed. (FC8600-60: 601 mm, FC8600-75: 753 mm, FC8600-100: 1053 mm, FC8600-130: 1352 mm, FC8600-160: 1613 mm)
*2 Operated with Graphtec specified media and conditions. In long-length cutting, the basket is used.
*3 When some grades of high-intensity reflective film is used, the using CB15UA/CB15UA-K30 blade and reinforcing the backing sheet of the media are recommended.
*4 For more information about compatibility of the OS or application software, please check the Graphtec website or contact your local representative of Graphtec.

Options

Item	Part No.	Description
Media stocker	RSK0020	For FC8600-60 (Stock roller, bracket)
	RSK0021	For FC8600-75 (Stock roller, bracket)
	RSK0022	For FC8600-100 (Stock roller, bracket)
	RSK0023	For FC8600-130 (Stock roller, bracket)
	RSK0024	For FC8600-160 (Stock roller, bracket)
2nd pen holder	ECK0009	2nd pen holder (dealer option)
Flange	OPH-A21	Flange for media holding
Additional push roller	OPH-A22	One additional push roller

Supplies

Item	Part No.	Description	Package
Blade holder	PHP33-CB09N-HS	For 0.9mm dia. blade (CB09U series)	1 set/pack
	PHP33-CB15N-HS	For 1.5mm dia. blade (CB15U series)	1 set/pack
	PHP35-CB09-HS	For 0.9mm dia. blade (CB09U series)	1 set/pack
	PHP35-CB15-HS	For 1.5mm dia. blade (CB15U series)	1 set/pack
Cutting blade	CB09UB-5	0.9mm dia. supersteel blade	5 blades/pack
	CB09UB-K60-5	0.9mm dia. 60º angle, for cutting thin film	5 blades/pack
	CB15U-5	1.5mm dia. supersteel blade	5 blades/pack
	CB15U-K30-5	1.5mm dia. 30º angle, for cutting sandblast rubber	5 blades/pack
	CB15U-K20-2SP	1.5mm dia. 20º angle, for cutting sandblast rubber	2 blades/pack
	CB15UA-5	1.5mm dia. for cutting high intensity reflective film	5 blades/pack
	CB15UA-K30-5	1.5mm dia. 30º,for cutting high intensity reflective film	5 blades/pack
	CB15UB-2	1.5mm dia. for cutting small character	2 blades/pack
Cross-cutter blade	CT01H	Standard type	1 blade/pack
	CT02U	High durability type	1 blade/pack
Fiber-tip pen holder	PHP31-FIBER	For KF700 series pen	1 set/pack
Water-based fiber-tip pen	KF700-BK	Black colour pen	10 pens/pack
	KF700-RD	Red colour pen	10 pens/pack
	KF700-BL	Blue colour pen	10 pens/pack
Ballpoint pen holder	PHP34-BALL	For KB700 pen	1 set/pack
Oil-based ballpoint pen	KB700-BK	Black colour pen	10 pens/pack
Pouncing tool	PPA33-TP12	Steel pin 1.2 mm dia.	1 set/pack

Standard accessories

Item		Q'ty	Description
Power cord		1	The type of cord is different by destination
Cutting blade holder		1	PHP33-CB09N-HS
Cutting blade		1	CB09UB
Fiber-tip pen holder		1	PHP31-FIBER
Water-based fiber-tip pen		1	KF700-BK (black ink)
Stand		1	Parts kit of stand
Media stocker		1	Set of stock rollers and mounting brackets (Installed on the stand)
Basket	PG0039	1	Parts kit for FC8600-60
	PG0040		Parts kit for FC8600-75
	PG0041		Parts kit for FC8600-100
	PG0042		Parts kit for FC8600-130
	PG0043		Parts kit for FC8600-160
USB cable		1	Cable for USB2.0, 2.9m long
DVD-ROM		1	User manual (PDF format), Windows driver, Software (Plotter controller, Graphtec Studio, Cutting Master 3)
Manual		2	Quick start and safety guide

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