Specifications

Model name	FCX2000-60VC	FCX2000-120VC	FCX2000-180VC	FCX2000-120ES (*1)	FC4550-50	FC4510-60
Configuration	Digital servo system, Flatbed					
Media hold-down method	Vacuum suction			Electrostatic	Cling mat / Adhesive sheet	
Effective cutting area	610 mm x 920 mm	1,200 mm x 920 mm	1,800 mm x 920 mm	1,200 mm x 920 mm	590 mm x 430 mm	860 mm x 600 mm
Mountable media (Y-axis)	950 mm				500 mm	666 mm
Roll media support	Roll media stocker (manual feeding), supported media; width: up to 950 mm, weight: up to 5 kg				N/A	
Maximum cutting speed	400 mm/s (1 to 40 cm/s in 16 steps), in all directions				750 mm/s (1 to 75 cm/s in 23 steps)	
Cutting force	Tool 1: Max. 4.9 N (500 gf)				Tool 1: Max. 5.88 N (600 gf)	Tool 1, Tool 2 :Max. 5.88 N (600 gf)
	Tool 2: Max. 9.8 N (1 kgf)				Tool 2: Max. 2.94 N (300 gf)	
Cutting force settings	Tool 1: in 40 steps, Tool 2: in 40 steps				Tool 1: in 48 steps, Tool 2: in 30 steps	Tool 1, Tool 2: in 48 steps
Minimum character size	Approx. 10 mm square (varies with character font and media)				Approx. 5 mm square (varies with the character font and media)	
Programmable resolution	GP-GL mode: 0.1/0.05/0.025/0.01 mm, HP-GL™ : 0.025 mm					
Distance accuracy	Max. 0.1% of the distance moved or 0.1 mm, whichever is larger (in plotting mode) (*2)				Max. 0.2% of the distance moved or 0.1 mm, whichever is larger (*2)	
Perpendicularity	Max 0.5 mm / 900 mm (in ploting mode)				Max. 0.3 mm / 430 mm	Max. 0.4 mm / 610 mm
Repeatability	Max 0.1 mm (excluding contraction of media, in plotting/cutting mode) (*2)				Max. 0.1 mm (*2)	
Standard interfaces	RS-232C, USB2.0 (High-Speed), and Ethernet (10BASE-T/100BASE-TX)				RS-232C and USB2.0 (High-Speed)	
Buffer memory	2 MB					
Command sets	GP-GL and HP-GL™ emulation (set by menu, or selects automatically by received data)				GP-GL and HP-GL™ emulation (set by menu)	
Number of tools	Two tools					
Cutting blade, pen, and tool types	Cutting blade (supersteel), Pens (Water-based fiber-tip pen, oil-based ballpoint pen), and Creasing/scoring tool				Cutting blade (supersteel), Pens (oil-based ballpoint pen), and Creasing/scoring tool	
Others	ARMS, Reverse side Cutting/Creasing using ARMS, ARMS Copy function, Creasing, Cutting/creasing in multiple passes					
Power source	100 to 240 VAC, 50/60 Hz (Auto switching)					
Power consumption	Max. 140 VA				Max. 120 VA	
Operating environment	Temperature: +10 to +35 °C, Humidity: 35 to 75% RH (non-condensing)					
Guaranteed accuracy environment	Temperature: +16 to +32 °C, Humidity: 35% to 70% RH (non-condensing)					
External dimensions	1344 x 1409 x 930 mm	1934 x 1409 x 930 mm	2534 x 1409 x 930 mm	1934 x 1409 x 930 mm	857 x 780 x 200 mm	1172 x 968 x 200 mm
[W x D x H] (Approx.)	(Including stand)	(Including stand)	(Including stand)	(Including stand)		(Not including stand)
Weight (Approx.)	76 kg (Including stand) (*3)	99 kg (Including stand) (*3)	116 kg (Including stand) (*3)	93 kg (Including stand)	19 kg	27 kg (Not including stand)
Compatible OS (*4)	Windows 10 / 8.1 / 8 / 7, Mac OS X 10.7 to 10.11				Windows 10 / 8.1 / 8 / 7 / Vista, Mac OS X 10.6 to 10.11 (*4)	
Supported software (*4) (*5)	Cutting Master 4, Graphtec Pro Studio, Graphtec Studio(for Mac)				Cutting Master 3, Graphtec Studio	
Compatible Standards — Safety	UL60950-1/cUL, CE marking (Low voltage and EMC)					
Compatible Standards — EMC	FCC-A, EN55032-A				FCC-A, EN55022-A	

Media type

Type of media	Thickness	Support cutting blade	FCX2000 Series 60VC	FCX2000 Series 120VC	FCX2000 Series 180VC	FCX2000 Series 120ES	FC4500 Series 4550-50	FC4500 Series 4510-60
Self-adhesive marking film (vinyl, fluorescent, reflective)	up to 0.25 mm	CB09UB	○	○	○	○	○	○
Heavy paper/board (pattern paper, oil board)	up to 0.5 mm	CB15U, CB15U-K30	○	○	○	○	○	○
	up to 1.0 mm	CB30UC	○	○	○	○		
Compressed foam sheet	up to 0.8 mm	CB15U-K30	○	○	○		○	○
Sandblast resist rubber	up to 1.0 mm	CB15U-K20	○	○	○	○	○	○
Cardboard (F/G flute)	up to 1.1 mm	CB30UC	○	○	○	○		
		CB15U-K30	○	○	○	○	○	○
Clear sheet for plastic boxes	up to 0.5 mm	CB15U	○	○	○	○	○	○
	up to 1.0 mm	CB15U-K30	○	○	○		○	○
High-intensity reflective film	up to 0.5 mm	CB15UA	○	○	○		○	○
	up to 1.0 mm	CB15UA-K30	○	○	○		○	○

○ : Available

Supplies

Item	Part number	FCX2000 Series	FC4500 Series	Description	Package
Cutting blade holder	PHP33-CB09N-HS	○	○	For CB09U series blade	1 set/pack
	PHP33-CB15N-HS	○	○	For CB15U series blade	1 set/pack
	PHP35-CB09-HS	○	○	For CB09U series blade	1 set/pack
	PHP35-CB15-HS	○	○	For CB15U series blade	1 set/pack
	PHP34-CB30-HS	○		For CB30UC cutting blade	1 set/pack
Cutting blade	CB09UB-5	○	○	0.9mm dia. 45°, Supersteel	5 blades/pack
	CB09UB-K60-5	○	○	0.9mm dia. 60°, for thin film	5 blades/pack
	CB15U-5	○	○	1.5mm dia. 45°, for thick film	5 blades/pack
	CB15U-K30-5	○	○	1.5mm dia. 30°, for sandblast resist rubber	5 blades/pack
	CB15U-K20-2SP	○	○	1.5mm dia. 20°, for sandblast resist rubber	2 blades/pack
	CB15UA-5	○	○	1.5mm dia. 45°, for high intensity reflective film	5 blades/pack
	CB15UA-K30-5	○	○	1.5mm dia. 30°, for high intensity reflective film	5 blades/pack
	CB30UC-1	○		3.0mm dia. 45°, for cardboard	1 blade/pack
Loupe	PM-CT-001	○	○	Checking blade length, for PHP33 and PHP35 series	1 set/pack
Creasing/ Scoring tool	CP-001	○	○	Stick type, for heavy paper	1 set/pack
	CP-002	○		Roller type (R0.2), for heavy paper	1 set/pack
	CP-003	○		Roller type (R0.6), for cardboard	1 set/pack
	PM-CT-002	○		Ball on tip of stick, for heavy paper	1 set/pack
Fiber-tip pen, pen holder	KF700-BK	○	○	Water-based fiber-tip pen, Black	10 pens/pack
	KF700-RD	○	○	Water-based fiber-tip pen, Red	10 pens/pack
	KF700-BL	○	○	Water-based fiber-tip pen, Blue	10 pens/pack
	PHP31-FIBER	○	○	Pen holder for KF700 series pen	1 set/pack
Ballpoint pen, pen holder	KB700-BK	○	○	Oil-based ballpoint pen, Black	10 pens/pack
	PHP34-BALL	○	○	Pen holder for the KB7000-BK pen	1 set/pack
Adhesive sheet, Cling mat	CM-0003-R1A	○		Adhesive sheet, supplying in roll (size 545 mm x 20 m)	1 roll/pack
	CM-0004	○	○	Cling mat for film based materials, size 435 x 610 mm	2 sheets/pack
	CM-0005	○	○	Cling mat for paper based materials, size 435 x 610 mm	2 sheets/pack

○ : Available

Standard accessories

FCX2000 series

Item	Q'ty	Description
Power cable	1 pc.	The type of cable is different by destination
Cutting blade holder	1 set	PHP35-CB15-HS
Cutting blade	1 set	CB15U (2 blades), CB15U-K30 (5 blades)
Loupe	1 pc.	PM-CT-001, for checking blade length
Fiber-tip pen	1 set	KF700-BK (Black) and PHP31-FIBER (pen holder)
Height adjustment tool	1 set	For adjusting position of tool head (plate, key wrench)
USB cable	1 pc.	Length 2.9 m
Roll media stocker	1 set	Loadable media: width up to 950 mm, weight up to 5 kg
Stand	1 set	Legs of the stand (Connecting bar is packed with main unit)
DVD-ROM	1 pc.	User's manual, Windows driver
Printed document	1 set	Quick guide, Safety manual
Durable flexible hose	1 pc.	For VC models only, 1.5 to 5 m (shrinked/extended) Connection bore diameter: 50mm
Hose band	2 pcs.	For VC models only, to fix the hose

FC4500 series

Item	Q'ty	Description
Power cable	1 pc.	The type of cable is different by destination
Cutting blade holder	1 pc.	PHP33-CB15N-HS
Cutter Blade	1 pc.	CB15U-2 (2 blades/pack)
Ballpoint pen	1 set	KB700-BK (Black) and PHP34-Ball (pen holder)
Creasing tool	1 pc.	CP-001, For FC4510-60 only
Cling mat	1 each	CM-0004 and CM-0005 for FC4550-50
	2 each	CM-0004 and CM-0005 for FC4510-60
Media positioning seal	1 set	Indicating the reference point for loading media
USB cable	1 pc.	Length 2.9 m
DVD-ROM	1 pc.	User's manual, Windows driver
Printed document	1 set	Quick Start Guide, Safety manual

Option

Item	Part number	Description
Panel for VC model (*)	OPH-A35	10 mm vacuum hole pitch for 60VC
	OPH-A36	10 mm vacuum hole pitch for 120VC
	OPH-A37	10 mm vacuum hole pitch for 180VC
Application Software	Graphtec Pro Studio Plus	Advanced edition of Graphtec Pro Studio
Stand	ST0032	For FC4510-60

(*: Factory installed option)

*1 Available in a limited region. Please contact your local representative of Graphtec.
*2 When operated with Graphtec specified media and conditions.
*3 Pump (blower) for vacuum suction media hold-down system is not included.
*4 For more information about Windows and Macintosh compatibility, please check the website or contact your local representative of Graphtec.
*5 The software can be used by downloading from Graphtec website.
· Brand names and product names listed in this brochure are the trademarks or registered trademarks of their respective owners.
· Items mentioned are subject to change without notice. For more information about product, please check the web site or contact your local representative.

⚠ **For safe operation of equipment**
· Before use, please read the user manual and operate properly in accordance with the description.
· To avoid malfunction or an electric shock by current leakage or voltage, please ensure a ground connection and use according to the specification.

astragraphia
member of **ASTRA**

GRAPHTEC

Flatbed Cutting Plotters

New

FCX2000 & FC4500
SERIES — SERIES

No Compromise
Low-cost, Die-free cutting and processing

The Graphtec FCX2000 is the ultimate solution for prototyping and small production runs of rigid materials without the use of a cutting die.
Reduce media waste / processing time with Graphtec's precision cutting and dedicated software.
Added offline (USB) operation*1 enables users of all skill levels to easily process materials.

*1: FCX2000 series only.
*FCX2000-60VC shown.

Advanced model with wide variety of tools and highest performance

FCX2000 SERIES

Max. force	Speed
9.8N (1 kgf)	400 mm/s

610, 1200, 1800mm width table sizes with choice of vacuum suction, or electrostatic media hold-down methods depending on application.
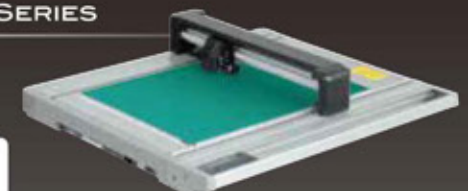
FCX2000-60VC	FCX2000-120VC	FCX2000-180VC

FCX2000-120ES	(* FCX2000-120 ES is available in limited region.)

New

Desktop model offering high performance and cutting speeds up to 750 mm/s

FC4500 SERIES

Max. force	Speed
5.88N (600 gf)	750 mm/s

A2 size FC4550-50 and A1 size FC4510-60 can be installed anywhere.

FC4550-50	FC4510-60

www.graphteccorp.com

Expanded industrial applications

Precision cutting is achieved by enhancements to the rigidity of the moving mechanism that reduces deflection due to pressure during cutting. This has enabled new functions such as curved creasing / scoring lines. Graphtec flatbed cutting plotters meet the wide variety of applications used in prototyping and short production runs of packaging and industrial materials.

Packaging
Cardboard (up to F flute :1.1 mm)

Packaging / POP
Heavy paper

Sticker
Seal / Magnet sheet

Sandblasting
Sandblast resist rubber

Garment / Shoe Pattern
Compressed foam sheet

Traffic Signage
High-intensity reflective film

Industrial Goods
Highly-functional film

Window Display
Self-adhesive marking film

Enhanced functions for higher productivity and work efficiency

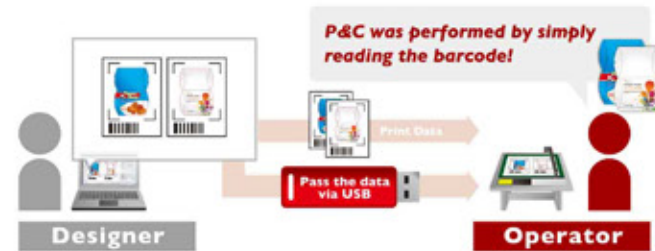### ■ Offline operation supported by use of USB flash memory (FCX2000 Series Only)

Offline operation using USB flash memory

Plot data is created from the design by using Cutting Master 4 or Graphtec Pro Studio, then the data is saved to USB flash memory. The plot data file can be selected from the USB by menu operation on the plotter, then cutting is performed. This simplified workflow enables users to operate without a computer.

I easily produced it!

Designer — Pass the data via USB — Operator

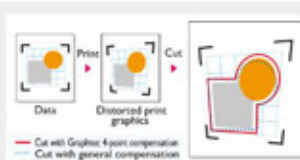#### Data management using barcode function with USB flash memory

In Print & Cut (referred to as "P&C") operation, the cutting data is automatically selected from USB flash memory by scanning the barcode printed on the media then performs contour cutting. This prevents the usage of incorrect data, and improves work efficiency.

P&C was performed by simply reading the barcode!

Designer — Pass the data via USB — Print Data — Operator

■ Enhanced ARMS (Advanced Registration Mark Sensing system) for improved productivity of P&C applications

Four-point compensation - Precise cutting even of distorted printed graphics

This feature compensates for any skewing or distortion in printed graphics to ensure precise contour cutting.

Data — Print — Distorted print graphics — Cut

Cut with Graphtec 4-point compensation
Cut with general compensation

Reverse side Cutting/Creasing using ARMS

Cutting and creasing of printed graphics is possible even on the reverse side of the media. This prevents any scratches or damage to the printed graphic. On the FCX2000 Series, operation is simple using **Cutting Master 4** or **Graphtec Pro Studio**.

Automatic ARMS Sensitivity Adjustment

Marks are detectable when there is reasonable contrast against the background. For example, a white mark on a colored background.

Supported by standard crop marks (FCX2000 Series only) - special marks are not required for cutting

P&C is performed by printing the industry standard crop marks. Adding special marks with Graphtec software is not necessary. Operation is simple when crop mark information is entered within **Cutting Master 4** software.

Reference Standard mark example
Printing object   Printing object

ARMS Copy function

After data is sent the first time, it can be copied multiple times without a PC. In the FCX2000 Series, the first four marks are scanned on the first sheet, and only the first mark in subsequent sheets. This improves productivity by shortening scan detection time.

Expanded cutting area (FCX2000 Series only)

This function expands the cutting area to include objects outside of the area enclosed by registration marks. Production efficiency is enhanced by reducing media waste.

Improved application software

The cutting plotter is ready for use with the supported software, with other advanced features available via plug-ins and optional software.

plug-in software **Cutting Master 4** Win｜Mac For FCX2000 Series
Cutting Master 3 Win｜Mac For FC4500 Series

Cutting Master 4/3 is Graphtec plug-in software for Adobe Illustrator and CorelDRAW Graphics Suite. It sends cut data to the plotter and includes a variety of functions such as: preview, registration mark creation, tool conditions, cut job settings and more. **Cutting Master 4/3** is easy to use and enables you to get the best performance from your plotter.

Graphics design software **Graphtec Pro Studio** Win

Easy-to-use application software for creating original designs. It has enhanced functions such as auto-shapes, shading, and editing functions. It can also configure the cutting conditions and other settings on the plotter. Importing of EPS, Ai*, CMX*, and PDF* file types are supported. Graphics created with other popular design software can be imported into the software.
* It is available on the Graphtec Pro Studio.

For MAC OS user
Included **Graphtec Studio**

Advanced software
Option **Graphtec Pro Studio Plus**

Graphtec Pro Studio Plus is the enhanced edition of Graphtec Pro Studio. It is optional software with functions for improving productivity and advanced design. Additional functions include: transformation of characters and graphics, automatic sequence number insertion, barcode creation, templates for rhinestone creation, nesting, directional change of cutting lines, changing cutting order, and more.
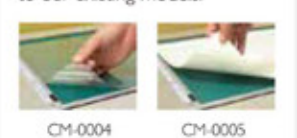
*   Supported software for the FC4500 Series is Cutting Master 3 and Graphtec Studio. Cutting Master 4 and Graphtec Pro Studio will be supported in Spring 2017.

Table size and Media hold-down method

FCX2000 SERIES

FCX2000-60   610   FCX2000-120   1200
Vacuum suction   900   Vacuum suction   920   Electrostatic (*)
(* Available in limited region.)

FCX2000-180   1800
Vacuum suction   920

Size: mm

FC4500 SERIES

FC4550-50   590   430   Cling mat

FC4510-60   860   600   Cling mat

Size: mm

■ Vacuum suction system
Holds media using external pump (blower). This option is most suitable for heavy or thicker materials.

■ Electrostatic adsorption system
Holds media by electrostatic that is generated by electrodes arranged inside the panel. This option is most suitable for cutting light weight materials.

■ Cling mat system
For holding a wide variety of media, there are two types of cling mat available. CM-0004 holds film based media. CM-0005 is used for paper based media. CM-0005 is made with soft plastic, which creates better creasing lines compared to our existing models.

CM-0004   CM-0005

Provided tools suitable for many applications

■ Creasing / scoring tool
PM-CT-002 is a new tool. This reduces peeling and cracking on the printed surface during the creasing/scoring process compared to our existing models.

● For curves on heavy paper (PM-CT-002) NEW
● For heavy paper (CP-001)
● For heavy paper (CP-002)
● For cardboard (CP-003)

■ Loupe for cutting blade
The Loupe is a standard accessory used to easily adjust extruded blade length with the PHP33 and PHP35 blade holders. (It is attached to the FCX2000 as standard accessory.)