GRAPHTEC

Flatbed Cutting Plotter
FC2250 Series

Advanced Flatbed Cutting Plotter on Cutting and Creasing Applications.

Traffic Sign
High-intensity Reflective film

Packaging
Cardboard E/F/G Flute

Garment Shoes
Pattern

Monument
Sandblast resist rubber

Offset Print
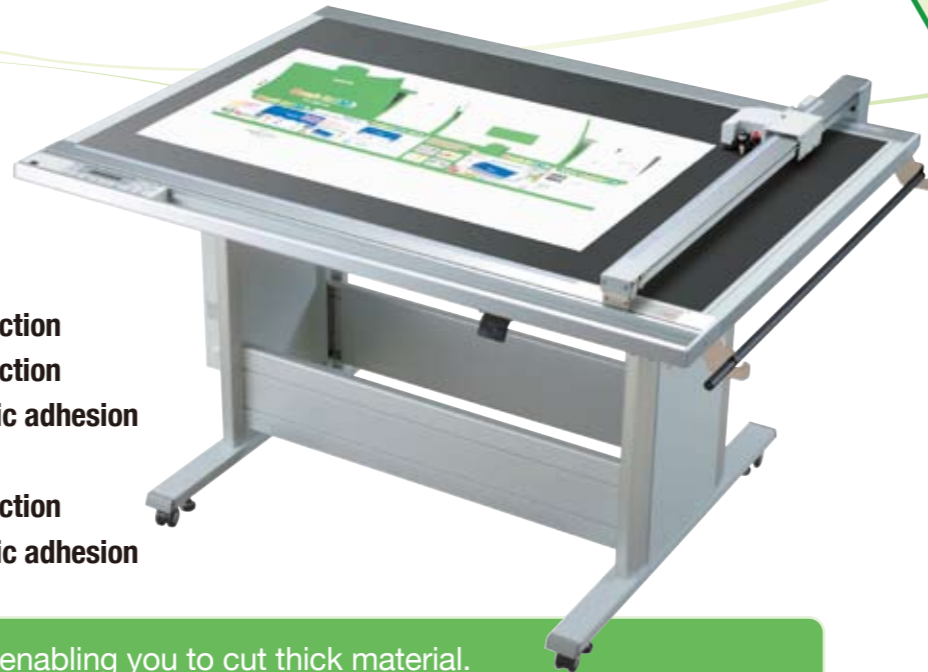Blanket

Print & Cut
Label

- *6 models are available, differ in sizes and hold down methods.*
- *The built-in Automatic Registration Mark Sensing system further simplifies contour cutting of printed materials. Incorporates ARMS to ensure precise cutting. Cut decals & other P&C application with ARMS.*
- *A tool lineup for cutting of thick paper and corrugated cardboard E/F/G grade.*
- *Fulfilling the max high pressure 1kg, and enables you to cut thick material.*
- *A USB2.0 interface.*
- *Software applications that improve work efficiency.*
- *Achieves a best-in-class cost performance.*

Flatbed Cutting Plotter
FC2250 Series

Advanced Technology for Plotting, Cutting and Creasing Applications

Applications

Garment Shoes Pattern

Traffic Sign High-intensity Reflective film

Monument Sandblast resist rubber

Offset Print Blanket

Packaging Cardboard E/F/G Flute

Print & Cut Label

6 models are available. Each model has different table size and hold-down methods, allowing you to select a model which meets your needs.

- FC2250-60VC   920x610mm,   Vacuum suction
- FC2250-120VC   1200x920mm, Vacuum suction
- FC2250-120ES   1200x920mm, Electrostatic adhesion
- FC2250-120MG   1200x920mm, Magnetic
- FC2250-180VC   1740x920mm, Vacuum suction
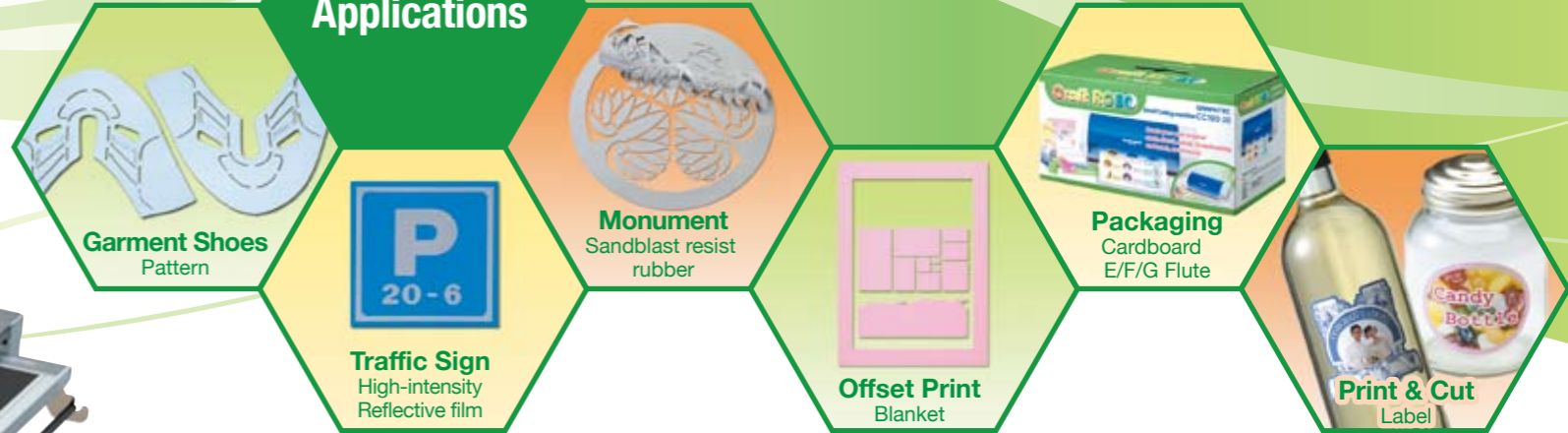- FC2250-180ES   1740x920mm, Electrostatic adhesion

Fulfilling the max high pressure 1 kg enabling you to cut thick material.

Includes speed up to 400mm/sec (16 in/sec) and 2 pens as standard equipment.

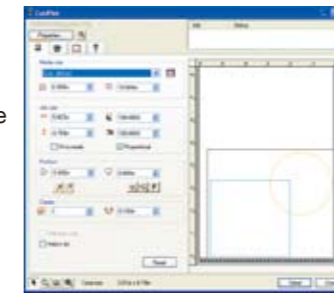USB 2.0 interface making a plug and play.

Includes a range of software applications that improve work efficiency and simplify operations.

Cutting Master 2

This plug-in software allows direct cutting from graphics applications. For higher productivity, create graphics or text in Adobe Illustrator or CorelDraw, then simply output directly to the plotter.

Main Features

- Direct output from the software
- Output by layer / color
- Possible to check the cutting lines by preview window
- Multiple over cutting is possible
- ARMS can be controlled by software
- Centering, Rotate, Mirror for easy layout
- Matrix copy for higher productivity
- Auto-welding for binding same color of shapes
- Tiling / Paneling for segmentation of cutting

OS version
- Windows, 2000, XP, Vista
- Mac OS X, 10.2 or later

Software version
- Illustrator for Windows 8, 9, 10, CS, CS2, CS3
- Illustrator for Mac 10, CS, CS2, CS3
- Corel DRAW 10, 11, 12, X3

Versatile software D-Cut Master

This software reads a DXF file in the AutoCAD R13 format and then enables data display, deleting, sorting, changing of the output order, specification of output setting, and saving functions as well as creation of GP-GL plot data and output to a plotter.

Main functions

- Output in separate layers or separate colors can be specified.
- Output conditions can be selected by layer name or color.
- Supports a sorting function to minimize media movement
- The Weed Border cutting function enables automatic output of a border to facilitate weeding of the cut media.
- Any drawing exceeding the plotter's Valid Area can be output in multiple pages using the Tiling function.
- Output conditions can be managed by media name.
- Matrix Copy function
- The Cutting Simulation function enables checking of the cut sequence, changing of the cut sequence, and tiled cutting prior to actual output.

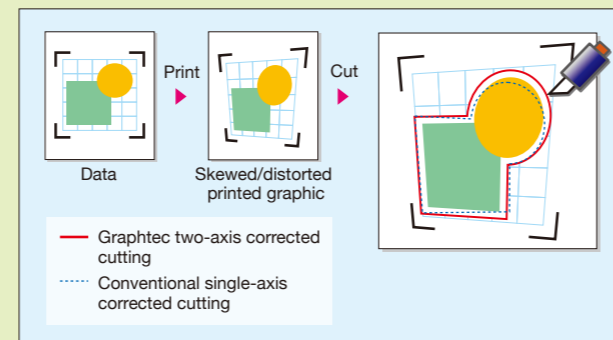## ARMS Advanced Registration Mark Sensing system

The powerful ARMS (Advanced Registration Mark Sensing system) feature simplifies contour cutting of printed images as well as significantly improving overall productivity for contour cutting items such as labels or stickers.
ARMS will automatically read several types of patterns.

Four-point registration mark (two-axis skew) correction ORIGINAL

Four-point registration mark sensing and X/Y-axis correction uses high-precision positioning to ensure accurate cutting of graphics that have been skewed or distorted during printed.
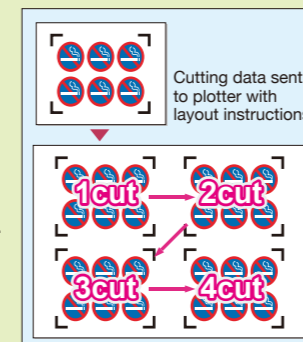
Data | Print ▶ Skewed/distorted printed graphic | Cut ▶

— Graphtec two-axis corrected cutting
···· Conventional single-axis corrected cutting

Segment area correction ORIGINAL

The intermediate registration marks in horizontal direction are detected to allow four-point correction for each individual segment area. This enables high-precision positioning of the whole area of prints that skewed during printing process.
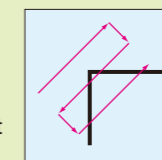
Multiple registration mark correction

Layout instructions are sent together with the cutting data for designs printed using layout functions such as set in a RIP, enabling continuous detection of registration marks for cutting. This feature is excellent when high accuracy is needed when cutting an array of copies.

Cutting data sent to plotter with layout instructions

1cut → 2cut
3cut → 4cut

Automatic registration mark detection

The first registration mark is detected automatically, eliminating the need to position the head to the registration mark manually.
Subsequent registration marks are automatically redetected even if marks are not immediately found, saving the time of starting over.

Patent pending

Full software support

Registration mark commands are provided to control ARMS functions from your software applications such as the Cutting Master 2.

- Cutting Master 2

Creasing functions

2-Tool Mounting for Easy Switching

Two tools can be mounted at the same time for easy switching. If you mount the cutter plunger and the creasing tool at the same time, you can perform both cutting and scoring operations without having to exchange tools.
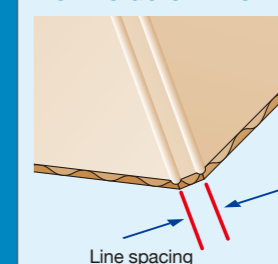If you mount a plotter pen, you can draw check plots before commencing the actual cutting.

Simple creasing function

A simple creasing function to create fold lines for clean folding on microflute and cardboard has been enabled.
- Up to three fold lines can be selected.
- Spacing between the lines can also be specified.
- Repeated creasing can also be specified for each line.

How to determine the number of creasing lines

Single-line creasing
Materials of a thickness of up to 0.1 mm

Double-line creasing
Cardboard of a thickness of approximately 0.1 to 0.5 mm

Triple-line creasing
Corrugated cardboard of a thickness of approximately 0.3 to 0.5 mm (rigid cardboard)

Line spacing

Specification

Model name	- 60VC	- 120VC	- 120MG	- 120ES	- 180VC	- 180ES
Configuration	Digital servo, Flatbed					
Media hold-down method	VC	VC	MG	ES	VC	ES
	VC model : Vacuum suction *1 , ES model : Electrostatic adhesion , MG model : Magnetic					
Effective cutting area	610 x 920 mm	1200 x 920 mm			1740 x 920mm	
	24.0 x 36.0 inch	47.2 x 36.0 inch			68.5 x 36.0 inch	
Maximum medium width	1010 mm (43.3 inch) (Y-axis direction)					
Number of pens / cutters	2					
Maximum cutting speed	400 mm/s (16 inch/s) (40-step range)					
Cutting force	Pen 1: Max. 4.9N(500 gf), 40-step range (1 to 40), Pen 2 : Max. 9.8N(1 kgf), 40-step range (2 to 80)					
Minimum character size	About 10 mm square (varies with the character font and media)					
Mechanical resolution	0.0025 mm					
Programmable resolution	GP-GL mode: 0.1/0.05/0.025/0.01 mm, HP-GL™ *3 : 0.025 mm					
Cutter and pen types	Cutter blades : Supersteel, Pens : Water-based fibertip, Oil-based ballpoint, Disposable ink *4					
Cutting media	Marking film (vinyl, fluorescent, reflective), Stiff paper/card up to 0.5 mm thick, Sandblast rubber sheets up to 1.0 mm thick, High-intensity reflective film, Polystyrene foam sheets					
Interfaces	RS-232C, USB 2.0 (full speed) ; auto-switching					
Command sets	GP-GL and HP-GL™ *3 emulation (selected by menu)					
Buffer memory	2 Mbyte					
Distance accuracy	Within ±0.1% (plotter mode)					
Repeatability	Within 0.1 mm (plotter mode)					
Perpendicularity	Within 0.5 mm/900 mm (plotter mode)					
Power supply	100 to 120 VAC, 50/60 Hz; 220 to 240 VAC, 50/60 Hz					
Power consumption	100 W or less					
Operating environment	Temperature: +10 to +35 deg.C, Humidity: 35% to 75% RH (non-condensing)					
Guaranteed precision	Temperature: +16 to +32 deg.C, Humidity: 35% to 70% RH (non-condensing)					
External dimensions (H x W x D) — Level	857 x 920 x 1285mm	944 x 1568 x 1285 mm			944 x 2068 x 1285mm	
	33.8 x 36.0 x 50.6 in.	37.1 x 61.7 x 50.6 in.			37.1 x 81.4 x 50.6 in.	
External dimensions (H x W x D) — 60degree inclination*2	-	1687 x 1568 x 987 mm			1687 x 2068 x 987 mm	
	-	66.4 x 61.7 x 39.0 in.			66.4 x 81.4 x 39.0 in.	
Weight (including stand)	approx. 58 kg	approx. 69 kg			approx. 74 kg	
	128 lbs.	152 lbs.			163 lbs.	

*1 A vacuum pump is not provided with VC models.
*2 The writing panel on VC models cannot be tilted.
*3 HP-GL™ is a registered trademark of the Hewlett-Packard Corporation of the United States.
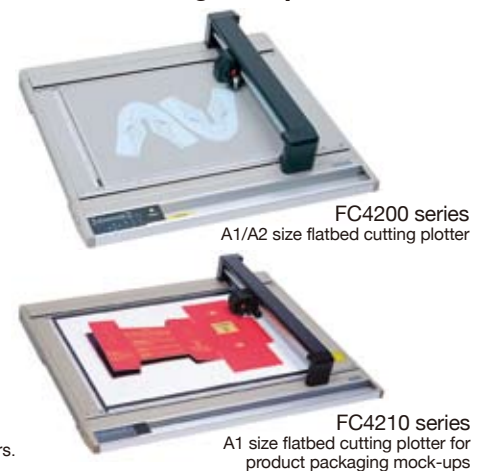*4 Disposable ink pens cannot be used with the high-force pen.

Supply

Item	Model	Contents	Q'ty
Cutter blade	PHP31-CB09-HS	Used with 0.9-mm diameter cutter blades (CB09UA-5)	1
	PHP31-CB15-HS	Used with 1.5-mm diameter cutter blades, comes with one tube of grease	1
	PHP31-CB15B-HS	Used with 1.5-mm diameter cutter blades (CB15U-5SP, CB15U-K30-5SP)	1
	PHP34-CB30-HS	Used with CB30UC-1 cutter blade for thick media	1
Creasing tool	CP-001	For card board	1
	CP-002	For card board	1
	CP-003	For corrugated board	1
Cutter blade	CB09UA-5	0.9 mm diameter, supersteel blade, comes with a spring, for cutting general film	5 blades/pack
	CB15U-5	1.5 mm diameter, supersteel blade, for cutting slightly thick film	5 blades/pack
	CB15U-5SP	1.5 mm diameter, supersteel blade, comes with a spring	5 blades/pack
	CB15U-K30-5	1.5 mm diameter, supersteel blade, for cutting thick materials	5 blades/pack
	CB15U-K30-5SP	1.5 mm diameter, supersteel blade, comes with a spring	5 blades/pack
	CB15UA-2		2 blades/pack
	CB15UA-K30-2	1.5 mm diameter, supersteel blade, for cutting high-intensity reflective	2 blades/pack
	CB30UC-1	3.0 mm diameter, supersteel blade, for cutting thick materials	1 blade/pack
Water-based fibertip pen	KF550-F8	1 pen each in red, black, violet, brown, blue, green, orange and pink	8 pens/pack
	KF550-S1	2 black pens and 1 pen each in red, blue and green	5 pens/pack
	KF551-RD	5 red pens	5 pens/pack
	KF552-BK	5 black pens	5 pens/pack
	KF555-BL	5 blue pens	5 pens/pack
	KF556-GR	5 green pens	5 pens/pack

The new tool lineup supports the cutting of thick paper and corrugated cardboard from micro-flute through E-flute.

Cutter plunger for thick materials
PHP34-CB30-HS

Cutter blade for thick materials
CB30UC-1

Creasing tool for cardboard
CP-002

Creasing tool for corrugated cardboard
CP-003

Standard accessories

Item	Description	Q'ty
Power cable		1
Cutter pen set	PHP31-CB15B-HS, CB15U-2SP, CB15U-K30-5SP	1 set
Water based fiber-tip pen	KF552-BK	1
Sheet holder plates	For MG models only (2 large, 2 medium, 4 small)	1 set
Hexagon wrench	For M4 bolts	1
Height adjustment plates	10 mm, 4 mm height	1 of each
Durable flexible hose	For VC models only, 1.5 to 5 m (can expand/contract) Connection bore diameter: φ 38 mm (-60), φ 50 mm (-120/180)	1
Hose band	For VC models only, φ 38 mm (-60), φ 50 mm (-120/180)	2
Vacuum pump installation base	For VC models only	1
USB cable (2.9m)	CBL1112-2.9M	1
CD-ROM	User's manual, Driver, other software	1

Flatbed Cutting Lineup

FC4200 series
A1/A2 size flatbed cutting plotter

FC4210 series
A1 size flatbed cutting plotter for product packaging mock-ups

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