


Corrugated Common Footprint Standard
Technical Specifications

CORRUGATED

IT MAKES THE MOST SENSE

GIVE YOUR BUSINESS THE EDGE





THE CORRUGATED COMMON FOOTPRINT: DESIGNED TO DELIVER UNCOMMON SAVINGS



In 2000, the corrugated packaging industry introduced a common footprint for U.S. shipping and display containers for produce. This modular packaging system makes loading, handling, storage and shipment of fresh fruits and vegetables far more efficient, while adding greater protection for this perishable merchandise.

What is the Corrugated Common Footprint (CCF)?

The CCF Standard establishes recommended uniform footprint dimensions and interstacking features for corrugated containers to facilitate efficient loading, handling, storage and shipment of produce (fresh fruits and vegetables) on standardized pallets.

The CCF Standard applies to corrugated containers used to ship produce from the growing or initial packing location to a retail location, usually through a distribution center, and includes containers that are designed to display produce in the store.

This voluntary standard establishes industry compatibility and provides a uniform platform for ongoing design creativity to satisfy individual customer marketing and distribution needs.

One standard. Multiple benefits.

From field to store, the CCF offers advantages at every step in the distribution chain. CCF gives growers and shippers:

- Economical, low-cost, recyclable packaging solutions
- Optimal cube utilization
- Greater product protection through custom design
- Access to a wide variety of box designs and material constructions
- Lower-impact change than switching to another container type
- Many sources of supply
- Long-term history and relationships

With CCF, retailers and distributors can:

- Decrease labor costs in the distribution center and the retail store by reducing training/handling requirements

- Distribute/source more easily to global markets since CCF is compatible with European Federation of Corrugated Board Manufacturers (FEFCO) European box standards accepted worldwide
- Reduce shrink by limiting the need to handle product in-store
- Earn additional revenue by recycling used corrugated containers
- Provide display-ready options, including direct-to-display tables, special displays and end caps

Consumers like the way CCF:

- Delivers consistently fresher, more attractively displayed produce
- Reduces handling of product before it reaches the store

IMPORTANT FACTS YOU SHOULD KNOW ABOUT THE CORRUGATED COMMON FOOTPRINT STANDARD

It allows for design flexibility.

This voluntary standard establishes industry compatibility while encouraging container manufacturers to employ corrugated's inherent design flexibility to suit a particular commodity's needs. The standard is not intended to prevent improvement in the design and performance of the corrugated container.

Design options include, but are not restricted to:

- Styles
- Varying depths
- Cooling/venting features
- Graphics
- Full pallet displayability
- Interior and exterior colors
- Self-locking and/or machine setups

It's compatible with international standards.

The Fibre Box Association (FBA) has worked in close cooperation with the European Federation of Corrugated Board Manufacturers (FEFCO) to harmonize the U.S. and European common footprint standards. As

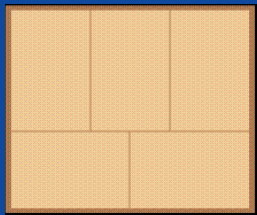
a result, produce shipping containers manufactured to either standard are compatible with each other. This compatibility (footprint sizes and container interstacking features) makes it possible to stack mixed loads of FBA and FEFCO standard-based containers on industry-standard pallets.

The CCF Standard does not specify strength values.

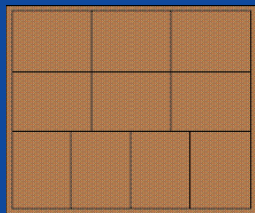
The CCF Standard informs the manufacturer of its responsibility to incorporate container strength appropriate to the application and commodity being shipped. It does not, however, give specific burst and/or compression/stacking strength value recommendations for produce containers.

Compression/stacking and burst performance are functions of the weight of the container contents and fiber content of the corrugated, in addition to container design features not necessarily covered by this standard.

Strength issues must be jointly evaluated between the purchaser and the corrugated supplier.



Full-Size Configuration:
5 Boxes Per Tier
Box Dimensions:
597 mm x 398 mm,
or 23½ in. x 15½ in.



Half-Size Configuration:
10 Boxes Per Tier
Box Dimensions:
398 mm x 298 mm,
or 15½ in. x 11½ in.



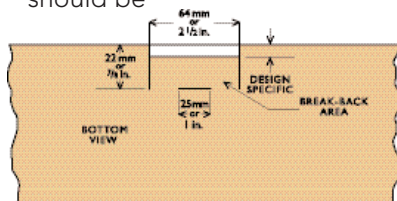
Possible Combination:

- HALF SIZE (40 cm x 30 cm)
Box Dimensions:
398 mm x 298 mm, or 15½ in. x 11½ in.
- FULL SIZE (60 cm x 40 cm)
Box Dimensions:
597 mm x 398 mm, or 23½ in. x 15½ in.

DETAILS MAKE THE DIFFERENCE

Stacking tab and receptacles details.

Stacking tabs are required for display containers only (they are optional for non-display containers). Stacking receptacles are required on both display and non-display containers. The container should be designed so that no vertical wall (e.g., rollover walls or other internal structures) will impede the insertion of a compatible container with thicker tabs into the receptacles. However, the bottom portion of the receptacle should be

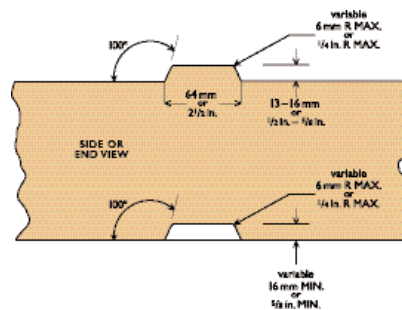


Stacking Tab and Receptacles Details

designed to be snug when an identical container is placed upon it, while retaining the break-back feature.

Compression/Stacking strength.

Compression strength/stacking minimum strength values are not included in the standard. Container suppliers and their customers should adopt adequate compression strength specifications. All containers made under the CCF Standard, and certified as such, must perform adequately throughout the entire distribution system.



Ergonomics.

Access or hand holes are optional. If provided, however, they must be structurally sound without compromising the strength of the container.

Variable depths.

Variable depths are allowed to optimize shipping density and product protection. The container purchaser should specify container depths.

Nesting.

Each container must include appropriate geometry or features to prevent the container above from nesting into the container below.

Optional covers or lids.

Display containers may have an optional cover or lid, if it is not attached. However, no part of the container, including an optional cover or lid, can be larger than the base footprint's outside dimensions.

All other container features and performance attributes are a matter for commercial negotiation between the container manufacturer and the purchaser.

Trapping receptacles.

Trapping receptacles are allowable within the CCF Standard for produce, in applications where they can improve container performance, on the long sides only of 5-down display containers.

See this mark? It means your job just got easier.



The Corrugated Common Footprint marking on produce shipping containers signifies that:

- The container has been designed so that nesting will not occur, even when stacking mixed loads.
- Full- and half-size containers may be stacked on any Grocery Manufacturers' of America (GMA) or metric industry-standard pallet (48 in. x 40 in. or 1200 mm x 1000 mm) without overhang.
- The container may be stacked in stable mixed loads with other shippers' goods that are also packaged in standard footprint containers, regardless of the origin of the produce or the manufacturer of the container.
- The container may be shipped anywhere in the world without compromising industry standards. That means fewer containers need to be inventoried for goods being shipped to most markets throughout the world.
- The manufacturer recognizes its responsibility to adhere to good container design and manufacturing practices which ensure appropriate container strength for optimal product protection.

CCF container markings.

Containers meeting all the requirements of the CCF Standard may be self-certified by the container manufacturer, and, if certified, will display the appropriate marking as shown below. Artwork is available from the Fibre Box Association (FBA).



When using the CCF certification marking, the manufacturer must comply with these guidelines:

1. The certification marking must be printed on an outside surface of the container and must be within a circle or a rectangle.
2. The marking must be at least two inches in diameter, if circular, or two inches high, if rectangular.
3. The marking should be of a contrasting color to the area surrounding the marking.
4. The container manufacturer's name and location (plant or corporate) must also appear on the outside of the container.

All corrugated manufacturers may use the certification markings without obtaining permission from FBA.

Compliance and enforcement.

FBA will use reasonable efforts to educate all corrugated container manufacturers about the CCF Standard and the importance of using a certification marking only on containers in accordance with this standard.

Anyone who observes containers with the certification marking, which do not appear to be in compliance with the CCF Standard, should notify the container manufacturer. A sample of this allegedly non-complying container should also be sent to FBA headquarters.

Use of the CCF Standard is voluntary. Misuse is prohibited. FBA reserves the right to take all actions, including legal action, to maintain the integrity of the CCF Standard.

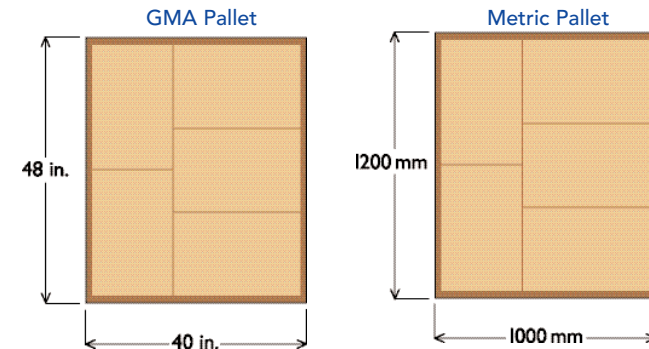
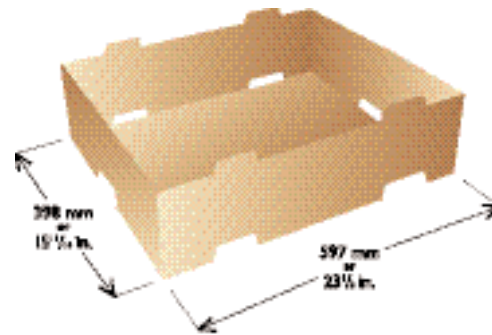


CORRUGATED COMMON FOOTPRINT STANDARD SPECIFICATIONS

FULL SIZE (60 cm x 40 cm)

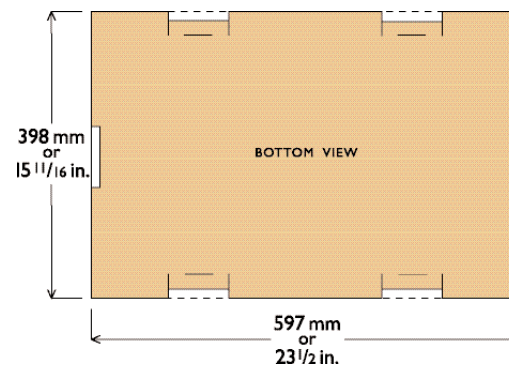
Footprint Dimension Requirements

597 mm x 398 mm or
23 1/2 in. x 15 11/16 in. (outside dimensions)

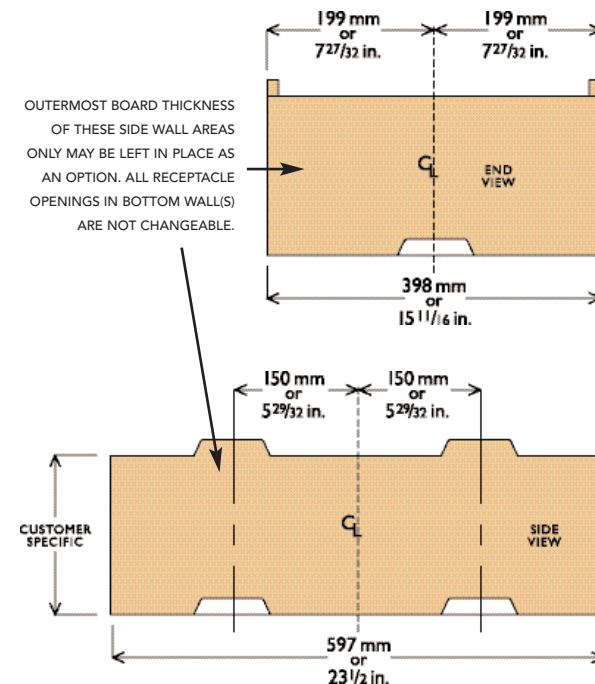


Full Size Design Criteria Notes

1. Perimeter lines represent the outermost plane/point of the container and exact outside dimensions at the base of the container.
2. Views show stacking tab and stacking receptacle locations. Refer to page 4 for tab and receptacle criteria.
3. Dimensions are presented in both metric and imperial measurements. Dimensions are compatible, but not necessarily direct equivalents.
4. Trapping receptacles are allowable for the long sides of 5-down display containers to improve container performance. Refer to page 4 for interpretive guideline.



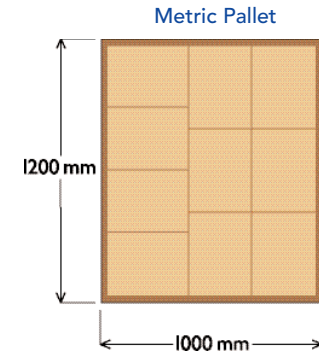
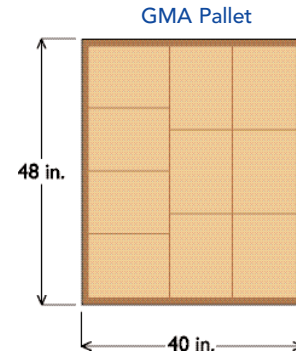
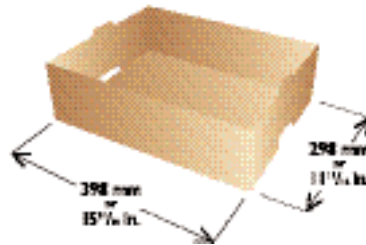
IN TRAPPING RECEPTABLES OPTION, ONLY THE OUTERMOST BOARD THICKNESS OF SIDE WALLS MAY BE LEFT IN PLACE IN THE 4 DASHED LOCATIONS ONLY.



HALF SIZE (40 cm x 30 cm)

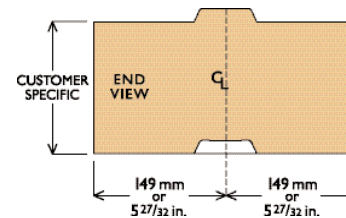
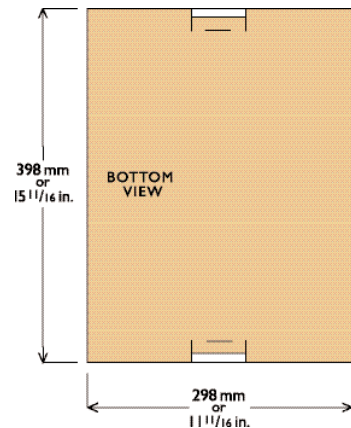
Footprint Dimension Requirements

398 mm x 298 mm or
15¹¹/₁₆ in. x 11¹¹/₁₆ in. (outside dimensions)



Half Size Design Criteria Notes

1. Perimeter lines represent the outermost plane/point of the container and exact outside dimensions at the base of the container.
2. Views show stacking tab and stacking receptacle locations. Refer to page 4 for tab and receptacle criteria.
3. Dimensions are presented in both metric and imperial measurements. Dimensions are compatible, but not necessarily direct equivalents.



CCF USA standards are subject to change.

Technical Specifications for the Corrugated Common Footprint Standard may be updated from time to time. The most current form of these specifications is available on the Fibre Box Association's website (www.fibre-box.org) or by contacting the Fibre Box Association at 847.364.9600 (U.S.A.).

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ARE WE SPEAKING THE SAME LANGUAGE?

This glossary of terms will help you when ordering Corrugated Common Footprint containers.

Break-Back Feature: A partially slitted area parallel to the stacking receptacle which allows the receptacle to accept stacking tabs of various thicknesses by "breaking back" the corrugated board.

Depth: The vertical dimension of a container as measured at a side along a line perpendicular to the bottom, up to the top horizontal plane of the container.

Display Container: An interstacking container which has a minimum 60 percent of the top surface area open for display purposes. A CCFdisplay container has both-stacking tabs and stacking receptacles.

Footprint: The outermost length and width dimensions of the container. Exact compliance is required at the base of the container.

Full Size (60cm x 40cm) and Half Size (40cm x 30cm): Two modular stacking arrangements that may be used in a single layer on a standard pallet (1200 mm x 1000 mm or 48 in. x 40 in.). Two half-

size containers will have the same footprint as one full-size container. A half-size layer of containers has the same pallet footprint as a full-size layer. These containers and stacking arrangements are modular because they allow for stable mixed pallet loads of containers as long as only like-sized containers are used in individual layers.

Linear Measurement Units: mm = millimeters, in. = inches, cm = centimeters.

Modular: Standardized to allow for columnar interstacking of containers of different sizes (i.e., Full Size or Half Size).

Nesting: A situation in which one container slips into the container immediately below it. Nesting may be the result of container misalignment or lack of structure to support the container above. It can result in damaged goods and contribute to the instability of a pallet load of containers.

Non-Display Container: A container having less than 60 percent of the top surface area open, including containers which are completely closed. Tear-out panels are optional. A non-display container has stacking receptacles. Stacking tabs are optional.

Outside Dimensions (O.D.): Outermost horizontal dimensions of the container (length, width).

Pallet: A portable platform for handling, storing or moving materials or packaging. The standard produce distribution pallet dimensions (length x width) are 1200 mm x 1000 mm (Metric Pallet) or 48 in. x 40 in. (GMA Pallet).

Stacking Receptacle: The area of the bottom portion and/or sidewall of a container that is designed to accept the stacking tab of the container immediately below.

Stacking Tab: A portion of the container that protrudes above the top surface and fits into the stacking receptacle of another container with a compatible footprint that is placed on top of it.

Trapping Receptacle: This allows the outermost thickness only of a vertical tray wall to be left in place and not stripped away where there was previously an opening. The opening on the portion of the receptacle incorporated in the bottom wall of the tray is retained. The use of trapping receptacles on 5-down, 100 percent open-top display containers can eliminate possible stacking tab disengagement from receptacles in identical trays above. This may be helpful specifically for containers with shiftable contents of approximately 25 lbs. or greater.

About FEFCO
FEFCO, the European Federation of Corrugated Board Manufacturers, represents 22 European national associations in the corrugated packaging industry. These associations represent almost all European companies from small- and medium-size to large integrated ones.

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www.fefco.org

About FBA
The Fibre Box Association (FBA) is a non-profit industry organization representing and serving the U.S. corrugated manufacturing industry. Its member companies produce 90% of corrugated packaging manufactured in the United States. FBA also has members in Canada and Mexico.

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The Corrugated Packaging Alliance (www.corrugated.org) is a corrugated industry initiative jointly sponsored by the American Forest & Paper Association (AF&PA) (www.afandpa.org) and the Fibre Box Association (FBA) (www.fibrebox.org). Its mission is to foster growth and profitability of corrugated in applications where it can be demonstrated, based on credible and persuasive evidence, that corrugated should be the packaging material of choice; and to provide a coordinated industry focus that effectively acts on industry matters that cannot be accomplished by individual members.



For details ask your corrugated supplier or call the Fibre Box Association (FBA).

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