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How to read a container's position on board: bay, row and tier

020184 is not a code: it is the container's address on the ship. Learn to read bay, row and tier from six digits.

Author: Özgür Konakcı · Level: Beginner · Version: 8 November 2026

Online interactive version: **https://ozgurkonakci.com/en/guide/container-stow-position/**

SHORT ANSWER

On a container ship each container's place is given by a six-digit position: the first two digits are the bay (sections from bow to stern), the middle two the row (from the centreline outwards) and the last two the tier (from the bottom up). Odd bays hold 20-foot containers and even bays 40-foot containers; even rows are on the port side, odd rows on starboard and the centre row is 00; tiers start at 02 in the hold and usually at 80 or 82 on deck.

The container's address on board

A container ship works like a three-dimensional rack. Every container slot has an "address", written as six digits: **bay – row – tier**. For example, **02 01 84**:

Digits	Example	Meaning
Bay (1–2)	02	The section along the ship, numbered from bow to stern.
Row (3–4)	01	The row across the ship, numbered from the centreline outwards.
Tier (5–6)	84	The level, numbered from the bottom up.

The position is used in the stowage plan (bay plan), terminal systems, loading and discharge lists, and dangerous goods and reefer checks. When a container "cannot be found" at a port, this is often the first thing to check.

Bay: 20 feet or 40 feet?

- Bays are numbered **from bow to stern**.
- **Odd numbers (01, 03, 05…)** are 20-foot slots.
- **Even numbers (02, 06, 10…)** are for 40-foot containers. A 40' container covers two 20' bays and is shown by the even number between them: a container covering 01 and 03 is in **bay 02**.

So the bay number also tells you the container's length.

Row: port or starboard?

- Rows are numbered **from the centreline outwards**.
- **Even numbers on the port (left) side**, **odd numbers on starboard (right)**.
- On ships with an odd number of rows, the centre row is **00**.

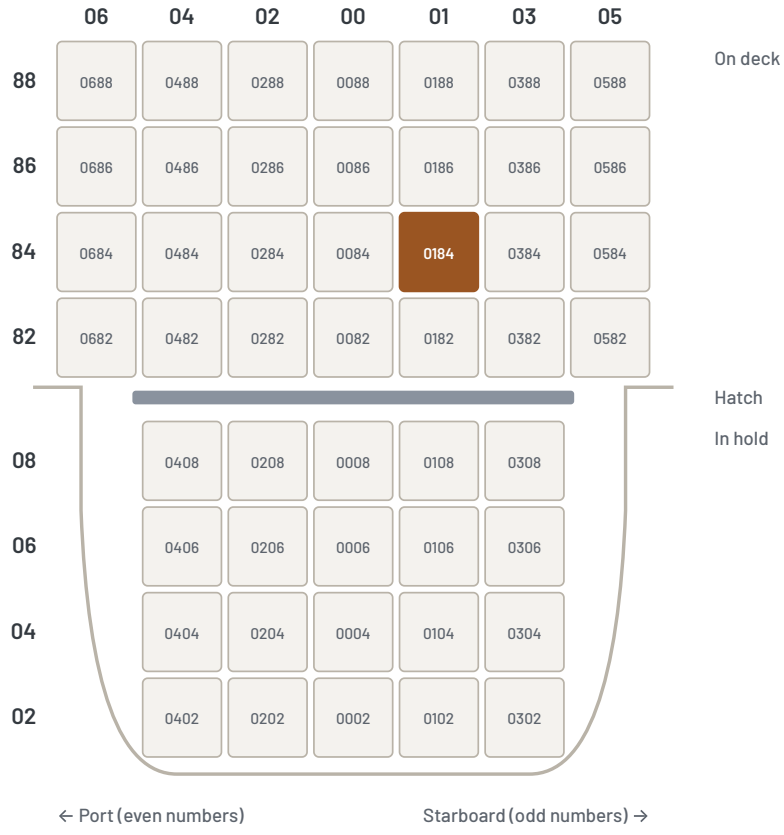
Bay plans are usually drawn **viewed from aft**, so port appears on the left and starboard on the right.

Tier: hold or deck?

- Tiers are numbered **from the bottom up**, in even numbers.
- **In the hold** numbering usually starts at **02**: 02, 04, 06…
- **On deck** it usually starts at **80 or 82**: 82, 84, 86…

If the tier is above 80, the container is on deck. That matters for weather exposure, dangerous goods segregation and lashing. The numbering logic is shared, but the starting numbers can vary slightly between ships.

Position decoder



Example bay cross-section (viewed from aft). Real ships have different numbers of rows and tiers; the numbering logic is the same.

Position	How to read it
`020184`	Bay 02 (40'), row 01 (starboard, next to the centreline), tier 84 (2nd tier on deck)
`130082`	Bay 13 (20'), row 00 (centreline), tier 82 (1st tier on deck)
`060686`	Bay 06 (40', spanning bays 05 and 07), row 06 (port), tier 86 (3rd tier on deck)
`310402`	Bay 31 (20'), row 04 (port), tier 02 (bottom tier in the hold)

Why it matters

- **Dangerous goods:** IMDG segregation rules look at where containers sit relative to each other. Segregation cannot be checked without the position.
- **Reefers:** Refrigerated containers can only go in slots with a power socket.
- **Weight and stability:** Heavy containers go lower, lighter ones higher; the stowage plan builds the ship's stability on this.
- **Discharge sequence:** A container to be discharged first should not sit beneath containers discharged later.

For general stowage rules and packing inside the container, see the topic on container packing and weight distribution.

Test yourself

1. How long is a container in bay 07? *(Answer: 20 feet; an odd bay.)*
2. Which side of the ship is row 04 on? *(Answer: Port; even numbers are on the port side.)*
3. Is a container at position 130086 in the hold or on deck? *(Answer: On deck; tier 86.)*

Frequently asked questions

What does an odd bay number mean?

Odd bays are 20-foot container slots. A 40-foot container covers two 20' bays and is shown by the even number between them; a container covering bays 05 and 07 is in bay 06.

Where is row 00?

On ships with an odd number of rows it is the row on the centreline. Rows are numbered from the centreline outwards: even numbers (02, 04, 06…) on the port side and odd numbers (01, 03, 05…) on starboard.

Is tier 82 on deck?

Yes. Tiers in the hold are numbered 02, 04, 06… from the bottom up; on deck numbering usually starts at 80 or 82 and rises by two per tier. Practice can vary slightly between ships.

SOURCES

GDV Container Handbook — Container stowage plans (bay, row and tier numbering) — https://containerhandbuch.de/chb_e/stra/stra_01_03_03.html
Marine Insight — Handling containers on ships: dimensions, markings and bay plan — https://www.marineinsight.com/handling-containers-on-ships-dimensions-markings-and-bay-plan/
Wikipedia — Stowage plan for container ships — https://en.wikipedia.org/wiki/Stowage_plan_for_container_ships

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