

Global Carry-On Sizer Chart

Airline limits, the measured-versus-nominal trap, and the tolerance budget that keeps one hard shell inside every sizer
Version 1.0 · 17 September 2026 · Verified against the carriers' own baggage pages on this date

Why this document exists

The most expensive sentence in a luggage spec sheet is "22-inch carry-on". That is a **body** measurement. By the time the wheels and the trolley are counted, the bag your customer actually carries is 23 to 24 inches — because the industry measures the shell, and the traveller is measured against the whole object.

Every carrier that publishes a caveat says the same thing: dimensions include wheels, handles and external pockets. Several name it explicitly; most US majors do not. So the measurement discipline has to live in your own QC, not in the customer's optimism.

This chart puts the binding numbers, the measurement method and the tolerance split on one page, so a designer, a factory and a brand are all working from the same figures.

1 · The intersection — the four numbers that bind

Stack the carriers in the table in section 3 and the overlap is small: **55 cm height, 35 cm width, 20 cm depth, 7 kg**. Each of those is set by a different carrier, and none of them is negotiable.

Dimension	Binding limit	Set by	Where it is measured
Height	55.0 cm	Ryanair, Lufthansa, Turkish Airlines, Air France	Floor to crown, over the wheels, trolley retracted and parked
Width	35.0 cm	Air France (55 × 35 × 25 cm)	Across the wheel housings — usually the widest point of a spinner, not the shell
Depth	20.0 cm	Ryanair, Emirates, Singapore Airlines	At the deepest point, normally the hinge-and-lock side
Weight	7 kg	Emirates, Singapore Airlines, plus the 7 kg allowance group	Weighed packed , on a calibrated scale — not empty

The four numbers to write into the brief: 55 × 35 × 20 cm measured over wheels, handles and pockets, and a 7 kg packed allowance.

2 · Measure the way a sizer measures

- 1. Pack it as it will travel.** A packed shell bulges at the seam and the hinge. An empty bag always passes; returns come from packed bags.

- 2. **Wheels on, trolley retracted and parked.** That is the configuration a sizer sees. Check that the retracted trolley plate does not sit proud of the shell crown — some designs add 3–5 mm there and nowhere else.
- 3. **Stand it on a flat floor and measure height from the floor**, not from the shell. The wheels are inside the number.
- 4. **Width goes across the wheel housings**, not the shell. **Depth goes at the deepest point**, normally the hinge-and-lock side.
- 5. **Measure each axis three times and record the largest.** Note the packer, the date and the fill weight. Weigh on a calibrated scale, packed.
- 6. **Then add a sizer margin of 5–8 mm.** A metal sizer is a fixed aperture and the bag has to drop in without force. A bag that tapes at 19.9 cm can still refuse to sit square in a 20 cm frame when it is full, skewed, or fitted with a proud hinge.

A tape measure is not a sizer

Close is not a pass. Reporting in 2026 describes carriers expanding automated bag-sizer scanners at boarding gates — machines that measure rather than judge. Treat "close enough" as a design error, not a customer-service outcome.

3 · The airline table

Values below are taken from each carrier's own baggage pages on **17 September 2026**, except where marked (2°) — those are secondary-source figures. Rules change without notice and fare exceptions are common. **Re-check the carrier's page before you commit a tool.**

Carrier	Carry-on, measured over wheels, handles and pockets	Weight	The fare that catches people
Ryanair	Free personal bag 40 × 20 × 25 cm (one official page says 40 × 30 × 20); Priority adds 55 × 40 × 20 cm	None on the free bag; 10 kg Priority	Basic fare: small bag only. Gate oversize € / £ 69.99
easyJet	Free 45 × 36 × 20 cm; large 56 × 45 × 25 cm	15 kg	Large bag is a paid add-on. Gate £ 60
Wizz Air	Free 40 × 30 × 20 cm; WIZZ Priority 55 × 40 × 23 cm	10 kg	Overhead bag needs WIZZ Priority
Lufthansa	40 × 30 × 15 cm personal item + 55 × 40 × 23 cm cabin bag	8 kg	Short/medium-haul Economy Basic: personal item only. Non-compliant € 60–110
British Airways	56 × 45 × 25 cm + 40 × 30 × 15 cm handbag	23 kg combined	Both normally included
Air France	55 × 35 × 25 cm + 40 × 30 × 15 cm personal item	12 kg combined	35 cm is the binding European width
Emirates	55 × 38 × 22 cm (2°: some tables 55 × 38 × 20 cm)	7 kg	Weight enforced at check-in
Turkish Airlines	55 × 40 × 23 cm + 40 × 30 × 15 cm personal item	8 kg	—
Singapore Airlines	Three sides ≤ 115 cm in total (2°)	7 kg	One cabin bag plus one personal item
United	22 × 14 × 9 in / 56 × 35 × 23 cm	None published	Basic Economy, most domestic: personal item only
Delta	22 × 14 × 9 in, 45 linear inches	None published	Delta Connection, ≤ 50 seats: personal item only

American	22 × 14 × 9 in / 56 × 36 × 23 cm	None published	Basic Economy: personal item only
Southwest	24 × 16 × 10 in / 61 × 41 × 25 cm	None published	Most permissive US major — and the numbers that fail elsewhere
Air Canada	55 × 40 × 23 cm / 21.5 × 15.5 × 9 in	None published	Economy Basic (from 3 Jan 2025): personal item only

A bag that clears this table travels free on the cheapest fares of every carrier listed. A bag built to the US 22-inch template does not. That intersection assumes a fare that **includes** a cabin bag. A bag that travels free on the cheapest European fares has to be a personal item at 40 × 30 × 15 cm — a far smaller product, and a different tool.

4 · The tolerance budget — how much to give back

You cannot design to 20.0 cm and hope manufacturing lands on it. You design so the **worst-case measured stack-up** is still inside the limit with a margin, and you write that margin on the drawing. What consumes depth on a hard shell: forming and trimming variation, hinge and lock hardware, wheel housing protrusion, texture or coating, and any logo plate. Each is small; together they are the difference between clearing a Ryanair sizer and not.

Measured dimension	Binding limit	Design nominal	Worst-case process tolerance	Worst-case measured	Margin
Height, floor to crown over wheels, trolley stowed	55.0 cm	53.6 cm	+0.6 cm (shell + trim + wheel castor)	54.2 cm	0.8 cm
Width over wheel housings	35.0 cm	34.0 cm	+0.4 cm	34.4 cm	0.6 cm
Depth at hinge and lock side	20.0 cm	18.4 cm	+0.6 cm	19.0 cm	1.0 cm
Depth at top handle and trolley plate	20.0 cm	18.4 cm	+0.7 cm	19.1 cm	0.9 cm
Empty weight	7 kg total allowance	2.9 kg	+0.15 kg	3.05 kg	3.95 kg for contents
Personal item, if you also build one	40 × 30 × 15 cm	39 × 29 × 14 cm	+0.3 cm per axis	39.3 × 29.3 × 14.3 cm	~0.7 cm

Allocate the budget, do not discover it. Split the depth tolerance deliberately — shell forming ±0.4 cm, assembly stack-up ±0.3 cm, hardware ±0.2 cm — and put the split on the drawing. A tolerance that is not written down is not a tolerance.

Do not fit an expansion gusset to a sizer-proof hard shell. Expansion adds 1–2 inches of depth; the bag that passed the tape measure fails the sizer once it is unzipped.

Settle the weight split before you brief the factory. At a 7 kg allowance a 3.0 kg empty bag leaves under 4 kg for contents. Every gram spent on a heavier wheel has to be bought back somewhere — usually in shell wall thickness, which is where the durability complaints live.

5 · The EU reform — not law, and not the number it looks like

This is the part of the topic where most published advice is wrong. The EU has been revising the air passenger rights regulation (EU 261/2004) since 2013, and cabin baggage is one clause in a much larger package. As at 17 September 2026 the reform **has completed the legislative process but is not yet in force**.

Two caveats before you read the table. First, the harmonised carry-on dimension is **reported not to have survived** into the final

text — that is a reporting position, not a quotation from the regulation, and it is the single reason we tell you not to design to it. Second, **we deliberately quote no vote count, no clause number and no document number**. Sources disagree with each other on those, and a document number that cannot be checked is worse than none at all. Where the table gives a date, it is a date on which sources broadly agree.

Date, as reported	What happened
5 June 2025	Council reached a political agreement on the reform
24 June 2025	Parliament's transport committee (TRAN) backed abolishing cabin bag fees
21 January 2026	Parliament adopted its second-reading position, including a 100 cm / 7 kg cabin bag — a position, not law
24 March 2026	Council declined to approve Parliament's amendments; every delegation except Portugal opposed
20 April 2026	Conciliation Committee convened to find a compromise
June–July 2026	Reporting describes a provisional agreement, then Parliament and Council approving it. Vote counts are not quoted — sources conflict
Not yet in force	Sources disagree on the interval between publication and application — reported both as roughly a year after publication and as up to two years after entry into force. 2027 or later

Do not design to the 7 kg / 100 cm figure. Reporting indicates the harmonised carry-on dimension and weight did not survive into the final compromise. What survives is a transparency rule — airlines must show, before booking begins, a fare that includes a cabin bag, while remaining free to offer a cheaper fare without one — plus the free personal item. When it applies, the reform makes pricing clearer; it does not hand your customer a bigger free bag.

Do not design to it at all yet. The rules that apply to a traveller this month are the carriers' own, in the table above. Anything built to a proposed standard is built to a document that can still change.

The design implication is convenient either way

A bag at 55 × 35 × 20 cm and 7 kg sits comfortably inside every sizer in section 3 — and inside whatever a free personal item turns out to be. Regulators have not given you a reason to make the bag bigger; the airlines have given you a reason to make it smaller.

Before you brief a tool, check whether the regulation has been published in the Official Journal and note the date. Until it applies, there is no EU date to design against — and a design based on a rumoured harmonised size is money spent on a rule that may never exist.

6 · What to do next

1. **Write the four binding numbers into the product brief:** 55 × 35 × 20 cm measured over wheels, handles and pockets, and a 7 kg total allowance. Treat the US 22 × 14 × 9 in template as a ceiling to sell against, not a target to build to.
2. **Add a sizer-margin clause to the spec** — 5–8 mm on each axis, measured packed — and make the factory sign off on the measurement method, not just the nominal drawing.
3. **Split the tolerance budget in the drawing:** shell forming, assembly stack-up and hardware, each with its own allowance and a named worst case.
4. **Build the gate-check test into your own QC.** Keep a 20 cm sizer frame at the line and drop a packed production sample through it. It takes ten seconds and it catches the failure that generates the review.
5. **Re-verify the airline table before you brief a tool**, and put the verification date in the document. Rules move; the table above is a snapshot, not a specification.

Verification note, and what this document is not. Airline figures were compiled on **17 September 2026** from the carriers' published baggage pages, and marked (2°) where only a secondary source could be found; cm conversions are rounded from the figures each carrier publishes. Carrier pages contradict themselves in places — one of them has shown two different sizes for the same free bag — and where they disagree, design to the smaller figure. Fares, gate fees and allowances change without notice, so a figure here is a snapshot of one day, not a specification, and nothing in this document replaces the carrier's own page on the day your customer flies. The section on the EU reform summarises what public reporting says about a regulation that **has completed its legislative process but is not yet in force**; the regulation's own text and the Official Journal entry govern, and **this is not legal advice**. Before committing tooling money, confirm both.