Cake Tin Conversion Chart

Every common tin in both centimetres and inches, the batter multiplier between any two of them, and what to do with the oven rather than guesswork.

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WHY TWO NUMBERS PER TIN

British tins are sold in round metric sizes — 15, 18, 20, 23, 25, 30 cm — that do not match the exact conversion of the American inch sizes. A tin sold as 20 cm is usually a 8" tin, but 20 cm is precisely 7.87". **The nominal figure is what the shop calls it; the exact figure is what the arithmetic uses.** Both are printed here so a recipe written in either system can be followed.

01 Round tins

Inches	Exact cm	Sold as	Area in²	Area cm²	Volume	vs 20 cm
6"	15.2	**15 cm**	28	182	4.0 cups	0.56×
7"	17.8	**18 cm**	38	248	5.3 cups	0.76×
8"	20.3	**20 cm**	50	324	7.0 cups	**1.00×**
9"	22.9	**23 cm**	64	410	8.8 cups	1.28×
10"	25.4	**25 cm**	78	507	10.9 cups	1.56×
12"	30.5	**30 cm**	113	730	15.7 cups	2.26×

Exact cm = inches × 2.54. The "sold as" column is the size printed on British packaging; it is rounded to the nearest millimetre that manufacturers actually use. Areas are π r^2 computed from the inch diameter, then converted at 6.4516 cm² per in². Volumes assume a 2-inch (5 cm) deep tin and match the published King Arthur Baking capacity for 8" and 9" rounds.

02 Square and rectangular tins

Inches	Exact cm	Sold as	Area in²	Area cm²	Volume
8 × 8"	20.3 × 20.3	**20 cm**	64	413	8.9 cups
9 × 9"	22.9 × 22.9	**23 cm**	81	522	11.2 cups
9 × 13"	22.9 × 33.0	**23 × 33 cm**	117	755	16.2 cups
9 × 5" loaf	22.9 × 12.7	**23 × 13 cm**	45	290	8.6 cups
10" bundt	25.4	**25 cm**	100*	645	12 cups

***A fluted ring has no closed-form area**, so 100 in² is a working proxy rather than a computed figure. Its 12-cup volume is published, and volume is what decides how much batter the tin takes. The loaf tin is measured at 2¾ inch depth, the others at 2 inch.

03 Batter multiplier

Find the tin your recipe was written for on the left, the tin you actually own across the top, and multiply every ingredient by that number.

$$\text{new batter} = \text{recipe batter} \times (\text{target tin area} \div \text{original tin area})$$

Recipe is for	15 cm	18 cm	20 cm	23 cm	25 cm	20 sq	23 sq	9×13	loaf	bundt
15 cm (6")	**1.00**	1.36	1.79	2.29	2.79	2.29	2.89	4.18	1.61	3.57
18 cm (7")	0.74	**1.00**	1.32	1.68	2.05	1.68	2.13	3.08	1.18	2.63
20 cm (8")	0.56	0.76	**1.00**	1.28	1.56	1.28	1.62	2.34	0.90	2.00
23 cm (9")	0.44	0.59	0.78	**1.00**	1.22	1.00	1.27	1.83	0.70	1.56
25 cm (10")	0.36	0.49	0.64	0.82	**1.00**	0.82	1.04	1.50	0.58	1.28
20 cm square	0.44	0.59	0.78	1.00	1.22	**1.00**	1.27	1.83	0.70	1.56

A multiplier of 1.00 does not mean an identical cake. A 23 cm round and a 20 cm square share the same floor area — 64 in² — so they take the same amount of batter, but one is a circle and one is a square. The corners of the square brown first; the centre of the round sets last.

04 Round to square, the swap people actually make

"Can I bake this in a square tin?" is the most common tin question after size, and the arithmetic is simpler than it looks.

Round tin	Nearest square	Multiplier	Effect
20 cm round	20 cm square	**1.28×**	More batter, same area — the corners add volume
23 cm round	20 cm square	**1.00×**	A true swap, the only one at this size
23 cm round	23 cm square	**1.27×**	Nearly a third more batter than the round
20 cm square	23 cm round	**1.00×**	Same area, going the other way

THE 23 CM ROUND = 20 CM SQUARE RULE

This is the one equivalence worth memorising. Both hold 64 square inches of floor, both take the same batter, and the swap is the only round-to-square change at a common size that needs no scaling at all. Everything else needs the multiplier above.

05 Moving the oven instead of the batter

Moved to…	Bake time	Oven temp	Why
A larger tin batter shallower	**Check 10–15 min early**	unchanged	Thinner layer sets sooner
A smaller tin batter deeper	**10–15 min longer**	**−25 °F / −14 °C**	Deep batter browns the edge before the centre sets

TEST THE CAKE, NOT THE CLOCK

These are the ranges King Arthur Baking gives — "start checking 10 to 15 minutes early" and "10 to 15 minutes longer" — not a formula. The gap between a 20 cm and a 23 cm tin is about 28% more batter over 28% more floor, and the difference between done and dry is around three minutes. **Use a skewer.**

06 Sources

1. **King Arthur Baking** — published standard tin volumes, and the guidance that a larger tin bakes faster and a smaller one needs longer. kingarthurbaking.com
2. **King Arthur Baking** — *The essential alternative baking pan sizes*, on computing area as π r^2 for rounds and length × width for rectangles. kingarthurbaking.com/blog
3. **Food Network** — standard guidance to drop oven temperature by 25 °F when batter runs deeper than the recipe assumes.

Centimetre figures are exact conversions (1 inch = 2.54 cm); the nominal sizes are those printed on British bakeware. Areas are computed and are reproducible from the dimensions shown. Volumes are King Arthur's published capacities. The bake-time and temperature figures are established practice summarised from the sources above, not measured values, which is why they appear as ranges.