RATE CARD - Girth-Based Pricing - What, Why & How.

Girth ((Width + Height) x 2 + Length) is a composite dimension metric available in Qargo rate cards, enabling automatic classification of shipments — such as loose colli vs. pallet freight — for accurate, dimension-based billing.

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Introduction

What is girth-based pricing?

Girth is a composite measurement calculated from a cargo item's three dimensions: **(Width + Height) × 2 + Length**. In Qargo, girth is available as a pricing metric across three areas of the rate card system: formula-based price calculations, price table lookups, and chargeable weight conversion conditions.

Why use it?

Many transport companies apply different billing rules depending on whether a shipment qualifies as *loose colli* (billed on cubic meters) or pallet freight (billed on loading meters). This classification often depends on girth: a shipment below a girth threshold qualifies as loose colli; one above it is billed as pallet freight. Without a native girth metric, this distinction could not be configured automatically in rate cards — users had to rely on manual workarounds or separate price lists.

How does it work?

Qargo calculates girth automatically from the cargo item dimensions (Width, Height, Length) already captured per goods line on an order. Girth can then be used:

- As a **metric in formula-based calculations** — the price is multiplied by or derived from the girth value per cargo item.
- As a **metric in price table lookups** — girth ranges define the pricing tiers.
- As a **condition on chargeable weight conversion factor lines** — girth thresholds determine which conversion factor (e.g. cubic meters vs. loading meters) is applied.

Terminology

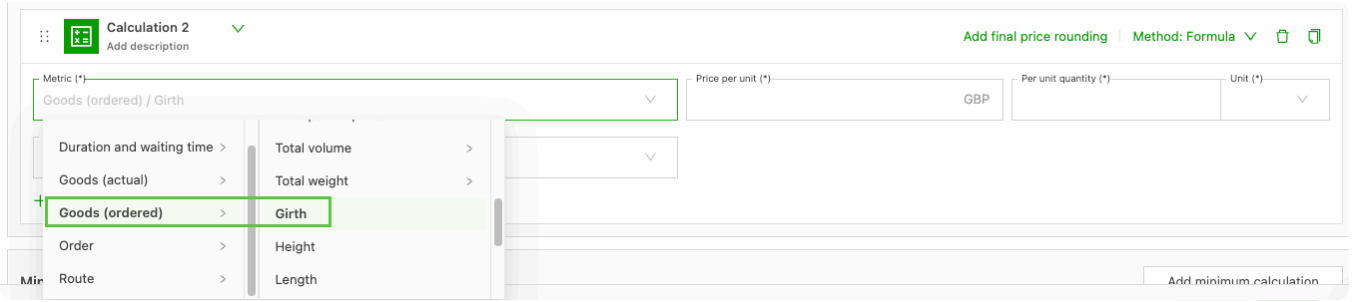
Term	Definition
Girth	A composite dimension metric calculated as (Width + Height) × 2 + Length per cargo item. Computed automatically from goods line dimensions.
Loose colli	A shipment classification for smaller, individually packed items typically billed on cubic meters rather than loading meters.
Per good	A calculation method where the formula or metric is evaluated individually for each cargo item, rather than once for the whole order.
Chargeable weight conversion	A configuration that converts goods metrics (weight, volume, loading meters, etc.) into a single chargeable weight value used for pricing.
Conversion factor line	A single line within a chargeable weight conversion, defining the input metric, the multiplier, and optionally a condition for when it applies.

Using Girth in Formula-Based Calculations

Girth can be selected as the calculation metric when setting up a *Formula* calculation on a price list. This is useful when the charge amount is derived directly from the girth measurement per cargo item — for example, a per-centimetre rate applied to each item's girth value.

How to configure

1. **NAVIGATE** to the relevant customer rate card and open the price list to configure.
2. **SELECT** the calculation method *Formula*.
3. **OPEN** the *Metric* dropdown. Under the *Goods (ordered)* tier, **SELECT** *Girth* (for a per-item calculation).
4. **ENTER** the formula rate and any additional options (offset, rounding, percent adjustment) as required.
5. **SAVE** the calculation.



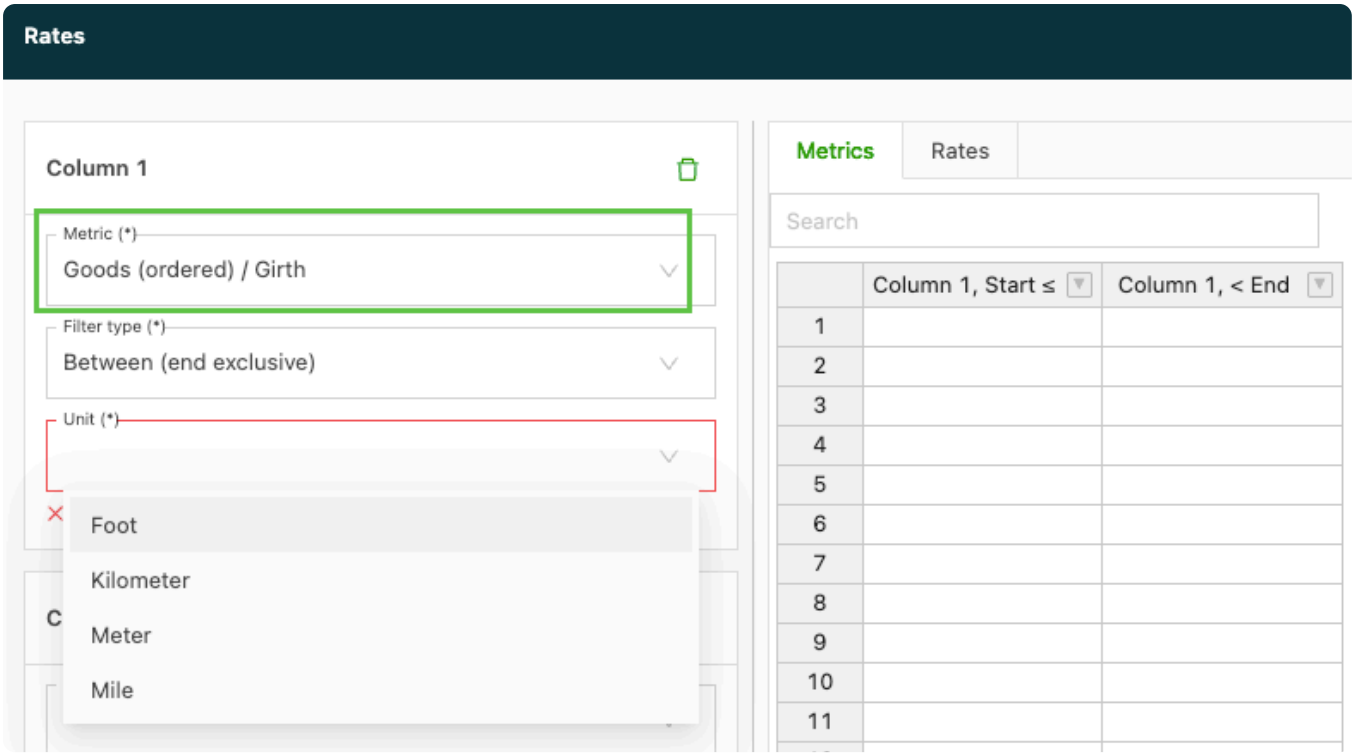
The calculation is evaluated **per cargo item** — the same evaluation method as other individual dimension metrics such as height, width, and length. This means if an order has three goods lines, the formula runs three times and the results are summed.

Using Girth in Price Table Lookups

Girth can be used as the row metric in a price table, enabling girth-based pricing tiers. This is the recommended approach when the charge depends on which girth band a cargo item falls into — for example, a lower rate for items with girth ≤ 200 cm and a higher rate above that threshold.

How to configure

1. **NAVIGATE** to the relevant price list and **SELECT** the calculation method *Price Table*.
2. **CHOOSE** *Girth* as the price table metric.
3. **DEFINE** the girth ranges and corresponding prices in the price table rows.
4. **SAVE** the price table.



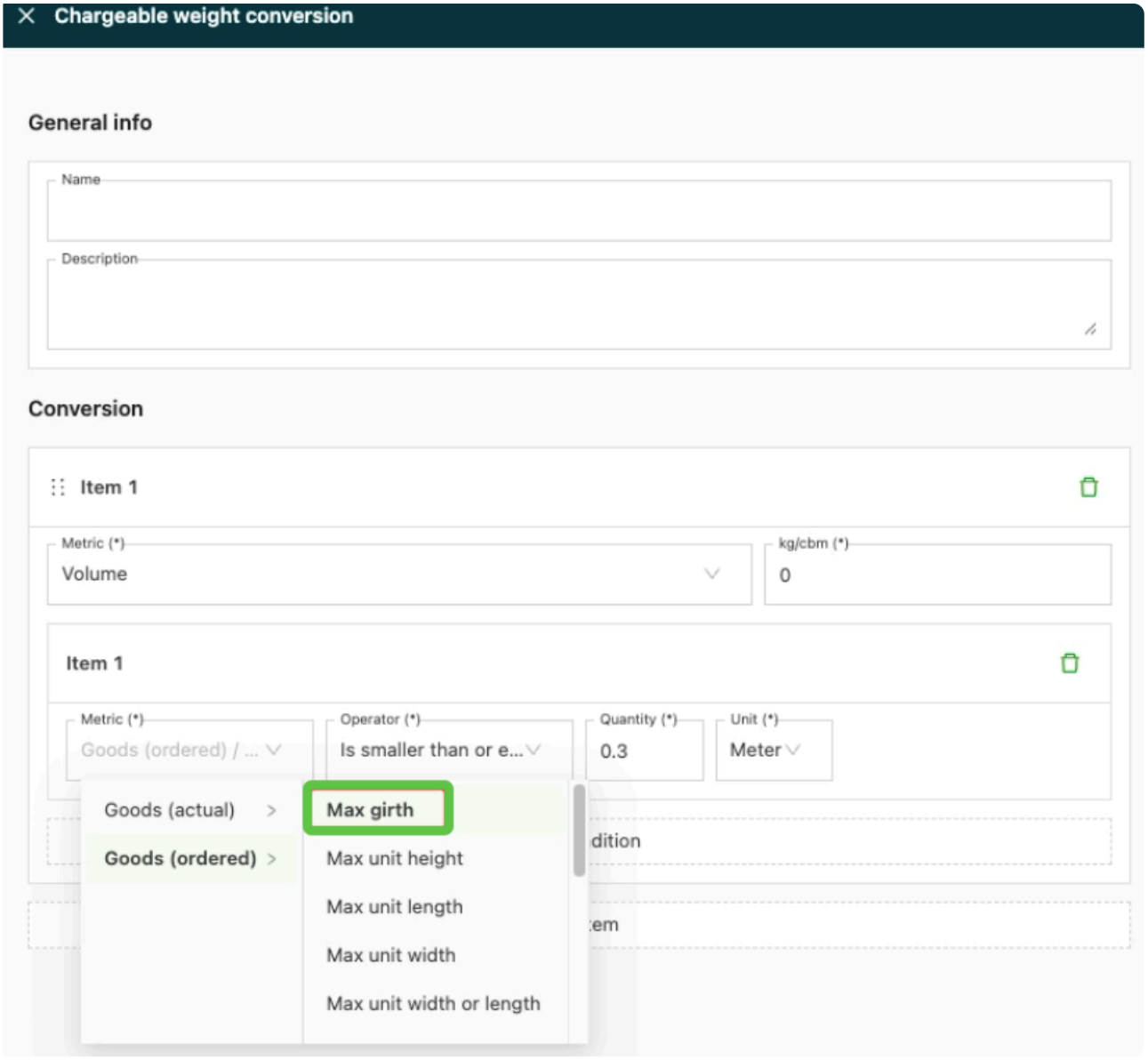
As with formula calculations, girth in price tables is evaluated per goods line. Ensure all cargo items on orders using this price list have Width, Height, and Length filled in, or a calculation error will appear on the charge.

Using Girth as a Chargeable Weight Condition

Girth can be added as a condition on chargeable weight conversion factor lines. This is the primary use case for the *loose colli* classification: a conversion factor line for cubic meters is applied when girth falls below a threshold; a loading meter conversion applies when girth exceeds it.

How to configure

1. **NAVIGATE** to *Rates > Chargeable weight conversions* and open the relevant conversion (or create a new one).
2. **ADD** a conversion factor line for the *loose colli* case — for example, input: *volume*, factor: *1*, condition: *Girth ≤ 300 cm*.
3. **ADD** a second conversion factor line for the pallet freight case — for example, input: *loading meters*, factor: *875*, condition: *Girth > 300 cm* (or leave without a condition as a fallback).
4. **VERIFY** the line order — the system evaluates lines top to bottom and applies the first matching condition per input specification.
5. **SAVE** the chargeable weight conversion.



Note: For chargeable weight conditions, use *Girth* for per-item evaluation. See the article RATES - Chargeable weight conversions - Add Conditions for a full guide to configuring chargeable weight conditions.

Example: Classifying Loose Colli vs. Pallet Freight

A transport company applies the following rule: if a shipment line has max weight ≤ 23 kg, max length ≤ 320 cm, **and girth ≤ 300 cm**, it qualifies as loose colli and is billed on cubic meters. Otherwise, it is billed on loading meters.

Configuration:
Two conversion factor lines in the chargeable weight conversion:

Line	Input	Factor	Condition
1	Volume (m³)	1	Girth ≤ 300 cm AND weight ≤ 23 kg AND length ≤ 320 cm
2	Loading meters	333	*(no condition — fallback)*

Result on a mixed order:

- *Cardboard box* (W: 60 cm, H: 40 cm, L: 80 cm → Girth = 280 cm, weight 10 kg, length 80 cm): matches Line 1 → billed on volume.

- *Euro pallet* (W: 80 cm, H: 120 cm, L: 120 cm → Girth = 520 cm): does not match Line 1 → falls through to Line 2 → billed on loading meters.

Limitations

- **All three dimensions are required.** Girth can only be computed when Width, Height, and Length are all filled in on the goods line. If any dimension is missing, the system will show a calculation error on the charge rather than defaulting to zero.
- **The formula is fixed.** Girth is always calculated as (Width + Height) × 2 + Length. Custom composite formulas or variations on this formula are not supported.
- **Goods-level metric only.** Girth is evaluated per individual cargo item. It does not aggregate or average across goods lines on an order — each item gets its own girth value.

Troubleshooting

Issue	Resolution
A calculation error appears on the charge	One or more goods lines are missing Width, Height, or Length. Ensure all three dimensions are filled in for every cargo item on the order.
Girth is not appearing in the metric dropdown	Confirm the calculation method is set to *Formula* or *Price Table*. Girth is only available under the *Goods (ordered)* or *Goods (actual)* tier, not at the order or route level.
The girth condition in my chargeable weight conversion is not being applied correctly	Check the order of the conversion factor lines. The system applies the first matching condition per input specification — more specific conditions should be placed above more general ones or fallback lines.
An order with mixed goods is being billed incorrectly	Review each goods line individually. Girth conditions are evaluated per item, so each line is assessed independently. Confirm the girth values for each item match the expected tier.