# Cane Feeding Table Area and Motor (Hugot)

Lateral feeding table area for a crushing rate, its length for a width, the table motor, and the auxiliary carrier motor, by Hugot eqns 1.7, 1.9 and 1.10.

**Method:** Hugot; Handbook of Cane Sugar Engineering; ...

## Input parameters

Unit system: SI

| Parameter | Value | Unit |
|---|---|---|
| Crushing rate | 250.00 | t/h |
| Number of feeding tables<br>Hugot recommends two tables above about 70 t cane/h. | 2.0000 | |
| Width of each table (along the carrier) | 8.0000 | m |
| Loaded area of the auxiliary (cross) carrier | 20.000 | m² |

## Calculated results

| Parameter | Value | Unit |
|---|---|---|
| Total table area | 166.67 | m² |
| Area of each table | 83.333 | m² |
| Length of each table | 10.417 | m |
| Motor of each table | 15.323 | kW |
| Auxiliary carrier motor | 6.8000 | kW |

**Notes for this case**

- Table speed is usually 3–6 m/min; the auxiliary carrier runs at about half the main carrier speed.

## Formula and method

$$S = \frac{2}{3} A\ [\mathrm{m^2},\ A \text{ in t/h}], \quad T = 0.25\, S_i\ [\text{metric hp}], \quad T_x = 0.34\, S_x\ [\mathrm{kW}], \quad S_i = \frac{S}{n_t}, \quad \ell = \frac{S_i}{W}$$

### Variables

| | | |
|---|---|---|
| $A$ | Crushing rate | kg/s |
| $n_t$ | Number of feeding tables | - |
| $W$ | Width of each table (along the carrier) | m |
| $S_x$ | Loaded area of the auxiliary (cross) carrier | m² |
| $S$ | Total table area | m² |
| $S_i$ | Area of each table | m² |
| $\ell$ | Length of each table | m |
| $T$ | Motor of each table | W |
| $T_x$ | Auxiliary carrier motor | W |

### Method and standards

Hugot's empirical rules from installed tables (metric horsepower, 75 kgf·m/s).

### Assumptions and limits

- Hugot's rules for chain tables feeding a cane carrier; whole numbers of tables. A note appears with one table above about 70 t cane/h.

### References

- Hugot
- Handbook of Cane Sugar Engineering

- 3rd ed. (Elsevier, 1986)
- ch. 1
- eqns 1.7 (S = 2A/3 m²)
- 1.9 (T = 0.25 S metric hp) and 1.10 (T = 0.34 S kW)

## Report details

| | |
|---|---|
| Report reference | FCC-4SQW-HFYE (the same inputs always give the same reference) |
| Generated | 17 November 2026, 19:35 UTC |
| Calculator | Cane Feeding Table Area and Motor (Hugot) |
| Method last reviewed | 13 November 2026 |
| Software release | FireCAD Calc, release of 17 November 2026 |
| Release checks | 2 reference cases of this calculator, computed independently, are checked on every release |

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

### This calculator online

https://calc.firecad.com/sugar-ethanol/cane-preparation/cane-feeding-table

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.