

Tomato paste plant CAPEX İÇİ½ investment structure, EBITDA and payback

Target application: tomato paste plant capex

Reference configuration: 60 t/h fresh tomato to 28İÇİ½30 İÇİ½Brix aseptic paste

CAPEX for a tomato paste plant is not a single number but a structure: process islands, utilities, automation, installation, spare parts and start-up. MCF Technology builds that structure before the quotation, so the investment can be compared, financed and defended in front of a credit committee.

SCOPE OF SUPPLY

- CAPEX split by island: reception, break, extraction, evaporation, aseptic filling, utilities, automation
- Working capital for the campaign (raw material, packaging, energy)
- Annual output and revenue at bulk export paste pricing
- EBITDA at steady state and simple payback
- Debt structure: 3İÇİ½10 year tenor, grace period, DSCR
- Sensitivity on inbound İÇİ½Brix, energy price and campaign length

TYPICAL OUTPUTS

CAPEX structure by process island İÇİ½ Annual revenue and EBITDA model İÇİ½ Payback and DSCR profile İÇİ½ Bank-ready investment memo inputs

DIMENSIONS AND BUILDING ENVELOPE

Process building footprint	2,000İÇİ½3,000 mİÇİ½ for the concentration and aseptic section
Clear height	9İÇİ½12 m under beam, 12İÇİ½18 m for the evaporator tower
Evaporation bay	450İÇİ½700 mİÇİ½ including vacuum unit, condensers and pump gallery
Aseptic filling room	120İÇİ½200 mİÇİ½ controlled area, 4.5 m clear height
Bulk paste storage	600İÇİ½1,200 mİÇİ½ per 10,000 t of 30 İÇİ½Brix paste
Heaviest single lift	18İÇİ½26 t (evaporator body)

LAYOUT İÇİ½ FUNCTIONAL ZONES IN FLOW ORDER

1 İÇİ½ Feed buffer	Pulp buffer tanks from the break section, feed pumps and inline İÇİ½Brix control
2 İÇİ½ Evaporation	Double / triple effect falling-film, forced circulation or MVR train
3 İÇİ½ Standardisation	Brix trim loop with inline refractometer, İÇİ½ 0.3 İÇİ½Brix at steady state
4 İÇİ½ Sterilization	Tubular or scraped-surface steriliser, hold cell >= 90 s, flash cooling
5 İÇİ½ Aseptic filling	220 L bag-in-drum, 1,000 L IBC, 3İÇİ½20 L bag-in-box
6 İÇİ½ Utilities & CIP	Steam, condensate recovery, cooling towers, CIP/SIP skid

UTILITIES AND CONSUMPTION

Installed power	1,400İÇİ½2,100 kW for the concentration and aseptic section
Steam	10İÇİ½18 t/h at 8İÇİ½12 bar (multi-effect); 4İÇİ½8 t/h with MVR

Cooling water	800½1,400 m½/h circulating on condensers and flash coolers
Compressed air	600½1,000 Nm½/h at 7 bar, oil-free for the aseptic zone
Steam consumption per tonne	0.22½0.32 t steam per tonne of evaporated water, effect count dependent
Manning	10½16 operators per shift including QC

CAPEX, OUTPUT AND PAYBACK

Tomato paste plant CAPEX breakdown

Three reference sizes with turnkey CAPEX, annual paste output, indicative EBITDA and simple payback ½ the same structure a bank or development fund expects in the investment memo.

30 t/h fresh tomato	Turnkey CAPEX: ½4.5 ½ 6.5 million Annual output: 9 000 ½ 12 000 t/year of 30 ½Brix paste EBITDA: 18 ½ 24% of revenue Payback: 4.5 ½ 6 years Commissioning: 12 ½ 15 months contract-to-commissioning
60 t/h fresh tomato (reference)	Turnkey CAPEX: ½8 ½ 11 million Annual output: 19 000 ½ 24 000 t/year of 30 ½Brix paste EBITDA: 20 ½ 26% of revenue Payback: 4 ½ 5.5 years Commissioning: 14 ½ 18 months contract-to-commissioning
120 t/h fresh tomato	Turnkey CAPEX: ½14 ½ 19 million Annual output: 38 000 ½ 48 000 t/year of 30 ½Brix paste EBITDA: 22 ½ 28% of revenue Payback: 3.5 ½ 5 years Commissioning: 16 ½ 20 months contract-to-commissioning

Assumptions behind the figures

- Campaign of 90½110 days per year, 20½22 productive hours per day.
- Hot break line, evaporation to 28½30 ½Brix, aseptic filling in 220 L bag-in-drum or 1 000 L IBC.
- Yield 5.5½6.5 t of fresh tomato per tonne of 30 ½Brix paste, depending on inbound ½Brix.
- CAPEX is turnkey scope: process equipment, automation, installation, commissioning and training; civil works and land excluded.
- EBITDA and payback assume export bulk paste pricing and no financing cost inside the operating margin.

Indicative engineering ranges used by MCF Technology for budget screening. Final CAPEX, EBITDA and payback are fixed only in the feasibility study, once inbound ½Brix, campaign length, utilities cost and target packaging are confirmed.

INSTALLATION, SITE CONDITIONS AND SCOPE BOUNDARIES

- Scope of supply: process equipment, automation, mechanical and electrical erection, commissioning, FAT/SAT, HACCP validation and operator training.
- Excluded from the ranges: land, civil works, building steelwork, external utility generation and import duties.
- Installation, commissioning and after-sales service are delivered worldwide by MCF crews, with remote diagnostics on the SCADA.

TECHNICAL FAQ

How is CAPEX split across a tomato paste plant?

As an order of magnitude: 15½20% reception, washing and sorting, 10½15% break and extraction, 30½40% evaporation, 12½18% aseptic filling, 10½15% utilities and CIP, 6½10% automation and SCADA. Installation and commissioning add on top of equipment.

What working capital does a campaign plant need?

A campaign concentrates raw material purchase, packaging and energy in 90½110 days while revenue arrives over the following months. Working capital of 15½25% of annual revenue is a realistic planning figure and is modelled explicitly in the financial plan.

What EBITDA can be expected?

Indicatively 18½28% of revenue at steady state depending on capacity, energy tariff and whether the plant sells bulk paste or

packaged product. The figure is a planning range, not a guarantee.

What payback do lenders consider acceptable?

Most lenders look for simple payback within the debt tenor plus a DSCR above 1.20  1.30 across the amortisation profile. MCF sizes the scenario so both conditions are met before the offer is signed.

Can CAPEX be phased?

Yes. A common phasing installs full reception, break and aseptic filling with one evaporation train, leaving space, utilities and automation headroom for a second train in year three.

NEXT STEPS

- Full technical page: <https://mcftechnology.group/en/tomato-paste-plant-capex>
- Configure the line and request the feasibility study: <https://mcftechnology.group/en/configurator>
- Run the ROI simulator: <https://mcftechnology.group/en/roi-simulator>
- Build the bankable financial plan (3  10 years): <https://mcftechnology.group/en/financial-plan>
- Request a quotation: <https://mcftechnology.group/en/contact>

DISCLAIMER

All figures in this datasheet are indicative engineering ranges used by MCF Technology for budget screening and layout discussion of the reference configuration. They are not a quotation, not a performance guarantee and not the audited result of a specific plant. Final specification, dimensions, utilities and CAPEX are fixed in the feasibility study on your product, packaging formats, utilities cost and site conditions.