

Turnkey Tomato Paste Plant in Africa ½ Rework and Fresh-Fruit Lines Delivered On Site

Target application: turnkey tomato paste plant Africa

Reference configuration: 3,000 kg/h finished product from aseptic bulk paste (500½5,000 kg/h configurable)

Most African tomato paste projects start from the same reality: local fresh tomato is available for a short season, demand for canned and sachet paste runs all year, and imported bulk concentrate is already in the country. That makes a rework line the fastest path to production, with a fresh-fruit section added later. This page covers what MCF changes when the plant is installed in Africa rather than in Europe ½ utilities, water, ambient design, packaging formats, logistics, documentation and financing.

SCOPE OF SUPPLY

- Rework line from aseptic drums, IBCs or bag-in-box as phase one; fresh-fruit reception and evaporation as phase two
- Utilities engineered for weak or unstable grids: generator sizing, voltage stabilisation, soft starters, surge protection
- Water treatment for well or river sources ½ filtration, softening, disinfection ½ with a process-water quality specification
- Ambient design for 40½45 ½C: oversized condensers and chillers, ventilated electrical rooms, cooling reserve on the tunnel
- Packaging formats that actually sell locally: 70½400 g sachets, 400 g / 830 g cans, catering tins
- Shipping, customs documentation, on-site erection, commissioning and operator training by MCF technicians
- Technical-financial dossier for banks, development finance institutions and export-credit structures

TYPICAL OUTPUTS

Tomato paste in 400 g / 830 g cans ½ Single-serve sachets 70½200 g ½ Catering tins 2½5 kg ½ Aseptic bulk for downstream reworkers

DIMENSIONS AND BUILDING ENVELOPE

Process and filling footprint	700½900 m½ at 3,000 kg/h (250½350 m½ at 500 kg/h, 1,100½1,300 m½ at 5,000 kg/h)
Clear height	6½7 m under beam over mixing and thermal section, 4.5 m over filling
Drum unloading station	60½110 m½, two alternating stations above 3,000 kg/h
Mixing bay	2 ½ 6,000 L tanks, 120½180 m½ including gravimetric dosing platform
Thermal section	90½140 m½ for pasteurizer, hold cell, buffer tank and CIP interface
Filling and packing	260½380 m½ including seamer, pasteurization tunnel, coding and case packing
Bulk and finished storage	500½900 m½ for inbound drums / IBCs and finished pallets

LAYOUT ½ FUNCTIONAL ZONES IN FLOW ORDER

1 ½ Bulk intake	Drum, IBC and bag-in-box reception, sampling and traceability scanning
2 ½ Unloading	Heated drum emptying stations, filtering, transfer pumps
3 ½ Mixing & recipe	Mixing tanks with agitator, gravimetric dosing of water, salt, sugar and spices
4 ½ Standardisation	Continuous mass-flow loop with inline refractometer, ½ 0.2 ½Brix at steady state
5 ½ Thermal treatment	Tubular or scraped-surface pasteurizer 92½98 ½C with validated holding section

6 ½ Filling & closing	Cans, glass jars, sachets or doypacks with seaming / capping and vacuum control
7 ½ Pasteurization tunnel	Tunnel or retort, cooling section and dryer before labelling
8 ½ End of line	Coding, labelling, case packing, palletizing and finished-goods staging
9 ½ Utilities & CIP	Steam skid, chilled water, compressed air, water treatment, CIP skid

UTILITIES AND CONSUMPTION

Installed power	350½450 kW at 3,000 kg/h (90½140 kW at 500 kg/h, 550½700 kW at 5,000 kg/h)
Steam	1.5½2.5 t/h saturated at 6½8 bar at 3,000 kg/h
Process and cooling water	8½12 m½/h at 3,000 kg/h, treated and softened before dilution
Compressed air	300½500 Nm½/h at 7 bar
Effluent	3½7 m½/h to treatment, mainly CIP and tunnel blowdown
Manning	6½9 operators per shift including QC and end-of-line
Operating calendar	250½300 days/year, 16½20 productive hours/day ½ not a seasonal campaign

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.
- African projects: generator-backed supply, borehole water treatment, oversized cooling on 40½48 ½C design ambient and spare-parts kit sized for 24 months of autonomous operation.

TECHNICAL FAQ

Why start with a rework line instead of a fresh-fruit plant?

Because it decouples production from the local harvest: bulk concentrate is available year-round, the investment is a fraction of a fresh-fruit plant, and the commercial and packaging organisation is built before the agricultural supply chain is.

How do you handle an unstable electrical grid?

By sizing a generator set for the full process load, adding voltage stabilisation and surge protection, and designing restart sequences in the PLC so a power dip does not spoil a batch in the pasteurizer.

What if only well or river water is available?

A treatment section is included in the scope ½ filtration, softening and disinfection ½ sized on a water analysis taken at site, with separate specifications for process water, boiler feed and CIP.

Does MCF install on site in Africa?

Yes. Delivery, mechanical and electrical erection, commissioning with capacity and ½Brix verification, and operator and maintenance training are performed on site, with remote SCADA assistance afterwards.

Can the plant be financed?

MCF issues the technical-financial dossier ½ CAPEX breakdown, operating costs, EBITDA, DSCR and payback ½ in the format banks, development finance institutions and export-credit agencies ask for. Financing itself is granted by the lender, not by MCF.

NEXT STEPS

- Full technical page: <https://mcfttechnology.group/en/turnkey-tomato-paste-plant-africa>
- Configure the line and request the feasibility study: <https://mcfttechnology.group/en/configurator>
- Run the ROI simulator: <https://mcfttechnology.group/en/roi-simulator>
- Build the bankable financial plan (310 years): <https://mcfttechnology.group/en/financial-plan>
- Request a quotation: <https://mcfttechnology.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.