

Tomato processing plant in the UAE & re-processing and packing hub for the Gulf

Target application: tomato processing plant uae

Reference configuration: 3,000 kg/h finished product from aseptic bulk paste (500&5,000 kg/h configurable)

The UAE rarely competes on fresh tomato tonnage: its advantage is logistics. Jebel Ali, Khalifa Port and the free zones make the Emirates the natural place to import aseptic bulk paste and re-export packed retail product across the GCC, East Africa and the Indian subcontinent. That is why most UAE projects MCF configures are rework and packing plants, not campaign plants & with the thermal and cooling design corrected for a 48 &C design ambient.

SCOPE OF SUPPLY

- Rework configuration: aseptic drum / IBC emptying, standardization to 22&28 &Brix, pasteurization and filling
- Optional fresh-tomato or greenhouse-tomato section where local supply is contracted
- Electrical design 400 V / 50 Hz with generator backup and free-zone utility interfaces
- Cooling and chilled-water plant sized on 48 &C design ambient, with dry-cooler option
- Filling in cans, glass jars, sachets and doypacks for multi-market portfolios
- Multi-language labelling and export coding for GCC and African destinations
- ESMA / Dubai Municipality food-contact documentation and HACCP validation
- Installation, commissioning and operator training in the UAE, with regional spare-parts support

TYPICAL OUTPUTS

Standardized tomato paste 22&28 &Brix & Ketchup, pizza sauce, passata & Retail cans, jars, sachets and doypacks & Export-ready palletised cases for GCC and Africa

DIMENSIONS AND BUILDING ENVELOPE

Process and filling footprint	700&900 m& at 3,000 kg/h (250&350 m& at 500 kg/h, 1,100&1,300 m& at 5,000 kg/h)
Clear height	6&7 m under beam over mixing and thermal section, 4.5 m over filling
Drum unloading station	60&110 m&, two alternating stations above 3,000 kg/h
Mixing bay	2 & 6,000 L tanks, 120&180 m& including gravimetric dosing platform
Thermal section	90&140 m& for pasteurizer, hold cell, buffer tank and CIP interface
Filling and packing	260&380 m& including seamer, pasteurization tunnel, coding and case packing
Bulk and finished storage	500&900 m& for inbound drums / IBCs and finished pallets

LAYOUT & FUNCTIONAL ZONES IN FLOW ORDER

1 & Bulk intake	Drum, IBC and bag-in-box reception, sampling and traceability scanning
2 & Unloading	Heated drum emptying stations, filtering, transfer pumps
3 & Mixing & recipe	Mixing tanks with agitator, gravimetric dosing of water, salt, sugar and spices
4 & Standardisation	Continuous mass-flow loop with inline refractometer, & 0.2 &Brix at steady state
5 & Thermal treatment	Tubular or scraped-surface pasteurizer 92&98 &C with validated holding section
6 & Filling & closing	Cans, glass jars, sachets or doypacks with seaming / capping and vacuum control

7 İÇİ½ Pasteurization tunnel	Tunnel or retort, cooling section and dryer before labelling
8 İÇİ½ End of line	Coding, labelling, case packing, palletizing and finished-goods staging
9 İÇİ½ Utilities & CIP	Steam skid, chilled water, compressed air, water treatment, CIP skid

UTILITIES AND CONSUMPTION

Installed power	350İÇİ½450 kW at 3,000 kg/h (90İÇİ½140 kW at 500 kg/h, 550İÇİ½700 kW at 5,000 kg/h)
Steam	1.5İÇİ½2.5 t/h saturated at 6İÇİ½8 bar at 3,000 kg/h
Process and cooling water	8İÇİ½12 mİÇİ½/h at 3,000 kg/h, treated and softened before dilution
Compressed air	300İÇİ½500 NmİÇİ½/h at 7 bar
Effluent	3İÇİ½7 mİÇİ½/h to treatment, mainly CIP and tunnel blowdown
Manning	6İÇİ½9 operators per shift including QC and end-of-line
Operating calendar	250İÇİ½300 days/year, 16İÇİ½20 productive hours/day İÇİ½ not a seasonal campaign

CAPEX, OUTPUT AND PAYBACK

UAE packing project İÇİ½ investment profile

Most UAE projects are rework and packing plants fed with imported aseptic bulk, so the grid below is expressed in kg/h of finished product.

500 kg/h finished product	Turnkey CAPEX: İÇİ½0.6 İÇİ½ 0.9 million Annual output: 1 500 İÇİ½ 2 200 t/year packed EBITDA: 12 İÇİ½ 18% of revenue Payback: 3 İÇİ½ 4.5 years Commissioning: 7 İÇİ½ 9 months contract-to-commissioning
1 000 kg/h finished product	Turnkey CAPEX: İÇİ½0.9 İÇİ½ 1.4 million Annual output: 3 000 İÇİ½ 4 400 t/year packed EBITDA: 14 İÇİ½ 19% of revenue Payback: 3 İÇİ½ 4 years Commissioning: 8 İÇİ½ 10 months contract-to-commissioning
2 000 kg/h finished product	Turnkey CAPEX: İÇİ½1.5 İÇİ½ 2.3 million Annual output: 6 000 İÇİ½ 8 800 t/year packed EBITDA: 15 İÇİ½ 20% of revenue Payback: 3 İÇİ½ 4 years Commissioning: 9 İÇİ½ 12 months contract-to-commissioning
3 000 kg/h finished product (reference)	Turnkey CAPEX: İÇİ½2.2 İÇİ½ 3.2 million Annual output: 9 000 İÇİ½ 13 000 t/year packed EBITDA: 16 İÇİ½ 21% of revenue Payback: 2.5 İÇİ½ 4 years Commissioning: 10 İÇİ½ 13 months contract-to-commissioning
5 000 kg/h finished product	Turnkey CAPEX: İÇİ½3.4 İÇİ½ 4.8 million Annual output: 15 000 İÇİ½ 22 000 t/year packed EBITDA: 17 İÇİ½ 23% of revenue Payback: 2.5 İÇİ½ 3.5 years Commissioning: 12 İÇİ½ 15 months contract-to-commissioning

Assumptions behind the figures

- 250İÇİ½300 working days per year, 16İÇİ½20 productive hours per day: the feedstock is stored aseptic concentrate, not seasonal fresh tomato.
- Inbound bulk paste at 36İÇİ½38 İÇİ½Brix in 220 L bag-in-drum or 1 000 L IBC, standardized in line to 22İÇİ½28 İÇİ½Brix.
- Finished product filled in tins, glass jars or sachets, with pasteurization and end-of-line packing included.
- CAPEX is turnkey scope: emptying station, mixing, standardization, pasteurizer, filler, closing, CIP, automation, installation, commissioning and training; civil works, land and bulk paste stock excluded.
- EBITDA and payback assume retail or food-service pricing of the packed product and no financing cost inside the operating margin.
- UAE project: 400 V / 50 Hz, cooling and chilled water sized on 48 İÇİ½C design ambient, free-zone utility interfaces,

multi-market labelling for GCC and African re-export.

Indicative engineering ranges used by MCF Technology for budget screening of rework projects, not a quotation and not the audited result of a specific plant. Final figures are fixed in the feasibility study, once inbound $\frac{1}{2}$ Brix, packaging formats, utilities cost and working hours 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.
- UAE: 400 V / 50 Hz, chilled water and cooling sized on 48 $\frac{1}{2}$ C design ambient, free-zone utility interfaces, multi-market GCC and African re-export labelling.

TECHNICAL FAQ

Why is a rework line usually preferred in the UAE?

Because feedstock is imported aseptic bulk rather than local fresh tomato: the line runs 250 $\frac{1}{2}$ 300 days a year, CAPEX is one order of magnitude lower than an evaporation plant and the value added is in packing and re-export.

What does the 48 $\frac{1}{2}$ C design ambient change?

Condensers, cooling towers, chilled-water capacity and product cooling sections are oversized; without that correction, filling temperature and shelf-life targets drift in summer.

Can the plant serve several export markets?

Yes $\frac{1}{2}$ recipe management and labelling are configured per destination (formats, languages, nutritional panels), with per-batch traceability of the bulk lots used.

Indicative CAPEX for a UAE packing plant?

$\frac{1}{2}$ 0.9 $\frac{1}{2}$ 1.4 million at 1 000 kg/h and $\frac{1}{2}$ 2.2 $\frac{1}{2}$ 3.2 million at 3 000 kg/h of finished product, turnkey process scope excluding civil works, land and bulk stock.

Are free-zone imports handled?

MCF supplies the documentation required for free-zone import and installation; customs duties, clearance and inland transport remain with the customer or its freight forwarder.

NEXT STEPS

- Full technical page: <https://mcftechnology.group/en/tomato-processing-plant-uae>
- 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 $\frac{1}{2}$ 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.