FOOD & BEVERAGE // DAIRY, JUICE & BAKERY

# Dairy, juice and bakery line inspection in South Africa

Short shelf-life products on fast, wet or floury lines, where the date code and the closure are the checks that matter most. Three stations, what each catches, and the rules behind them.

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Describe your line

// SHORT ANSWER

Dairy, juice and bakery line inspection in South Africa centres on two things a customer sees first: the pack is closed, and the date is right. addaScan builds three HIKROBOT-based stations for these lines: yoghurt and dairy cup lid and date code inspection, straw and cap checks on juice and dairy portion packs, and bread bag closure checks with the date read from the bag. Each page below gives the hardware and an indicative rand budget for a typical application.

// ON SOUTH AFRICAN LINES

## Short shelf life, high volumes, wet and dusty

These are high-volume, short shelf-life products. Milk SA reports 129 registered milk processors, with maas, yoghurt and kefir among the product categories it tracks (Milk SA, 2024). Juice and

## lines

dairy portion packs are filled in aseptic cartons; Tetra Pak's Pinetown carton packaging plant was opened by the President in 2024 (Presidency, 2024). Bakeries produced 2.192 billion loaves between October 2023 and September 2024, and bread is the country's second staple after maize meal (NAMC).

On these lines the date code changes every day and sometimes every shift, so a coder left on yesterday's date or out of ink can spoil a whole run. Closures matter as much: a lid not sealed, a straw missing from a portion pack, a loaf without a clip. Dairy lines are washed down, juice lines are wet and bakery lines are floury, so enclosures and lighting are part of every station design. On South African loaves the clip carries no date; the date is printed on the bread bag.

// LINE SOLUTIONS

# Line solutions for these lines

Each is a complete station with HIKROBOT hardware, installation and an indicative installed budget for a typical application, in rand excluding VAT. Projects involve custom requirements, so the final price follows a sample test.

| LINE SOLUTION | FAULTS IT CATCHES | HIKROBOT CONFIGURATION | INDICATIVE BUDGET (EXCL. VAT) |
|---|---|---|---|
| **Straw applicator inspection** | Straw missing, doubled or skew; cap missing; date code missing or unreadable | Two HIKROBOT vision sensors after the applicator, air jet | R 110 000 – R 390 000 |

| LINE SOLUTION | FAULTS IT CATCHES | HIKROBOT CONFIGURATION | INDICATIVE BUDGET (EXCL. VAT) |
|---|---|---|---|
| Yoghurt cup inspection | Foil lid missing or lifted; best-before and batch code missing or wrong | Vision sensor or two cameras + VisionMaster over the lanes | R 110 000 – R 680 000 |
| Bread bag closure inspection | No clip or tag; date on the bag missing, unreadable or wrong | OCR vision sensor, or colour camera + VisionMaster DL OCR | R 80 000 – R 540 000 |

// CHECKS

## The checks these lines use, and where each stops

The same inspection applications appear across these lines; each links to the page that explains it in depth.

| CHECK | APPLICATION | WHAT IT CATCHES | WHERE IT STOPS |
|---|---|---|---|
| Date and batch codes | OCR/OCV and code inspection | Missing, smudged or wrong dates on lids, cartons and bread bags | Print-quality grading; which marks the law requires is a food-law question |
| Lids, foils and closures | Fill level, cap and seal | Missing or lifted foil lids, missing caps and clips | Seal strength and leaks: a visual check is not a leak test |
| Straws and inserts | Presence and counting | Missing, doubled or skewed straws on portion packs | Items hidden under film or inside the pack |

| CHECK | APPLICATION | WHAT IT CATCHES | WHERE IT STOPS |
|---|---|---|---|
| Labels and sleeves | Label inspection | Wrong or missing labels and sleeves at changeover | Artwork approval |

// SOUTH AFRICAN RULES

## Rules that set the outcome these checks support

The rules require the outcome; a camera is one way to check it on every unit.

- **Dairy marking.** Containers of dairy products must show the best-before, use-by or sell-by date and the batch code, and the batch code must make the batch identifiable and traceable (R260, 2015, regs 25 and 29). A code station reads both on every unit.
- **Date marking.** Where a date is given, the labelling regulations set how it is shown (R146, 2010, reg 12). Which marks your products must carry is for your food-law adviser; the station checks that the marks you print are there and correct.
- **Hygiene and tamper evidence.** The food hygiene regulations set requirements for clean containers and protected food (R638, 2018). Lid and closure checks support this; they do not replace your hygiene programme.

// FAQ

# Questions about dairy, juice and bakery line inspection

## What should a dairy line inspect first?

The date and batch code on every cup, bottle or carton, straight after the coder, because the regulations ask for both and a wrong date affects the whole run. The second check is the lid or foil, because a lifted lid shortens shelf life and is visible to the customer.

## Where is the date on a South African loaf, and can a camera read it?

On the bread bag; the clip carries no date. A camera after the bag closer finds the clip or tag and reads the printed date from the bag in the same image when the print is near the closed end. Bag film is thin and creases, so the read is proven on your bags first.

## How much does inspection on a dairy, juice or bakery line cost in South Africa?

The three line solutions above give indicative installed budgets for a typical application, from about R 80 000 for a single vision sensor to about R 680 000 for a two-camera station on a wide filler, excluding VAT. Projects involve custom requirements, so the final price follows a sample test.

## Do cameras survive washdown on dairy lines?

HIKROBOT vision sensors and cameras with an IP67 rating keep it only with the lens cap fitted. Stations in washdown areas use those devices or housings, mounted out of the direct spray, and the cleaning routine is part of the site survey.

## Can the camera tell whether a yoghurt lid is sealed?

It can tell whether a lid or foil is present, seated and not lifted at the edge. Whether the seal is tight is a leak or seal-strength test, which a camera does not perform.

### SOURCES


1. Milk SA Annual Report 2024 (https://milksa.co.za/sites/default/files/2025-09/Annual%20Report%202024.pdf) (industry report, checked 2026-10-02)
2. President Cyril Ramaphosa: opening of the Tetra Pak carton packaging plant, Pinetown, 4 April 2024 (https://www.gov.za/news/speeches/president-cyril-ramaphosa-opening-tetra-pak-carton-packaging-plant-04-apr-2024) (government speech, checked 2026-10-02)
3. NAMC: Our daily bread (https://namc.co.za/our-daily-bread) (agency article, checked 2026-10-02)
4. Dairy and imitation dairy products regulations (R260, 2015) (https://faolex.fao.org/docs/pdf/saf143817.pdf) (regulation (FAOLEX copy), checked 2026-10-02)
5. Regulations relating to the labelling and advertising of foodstuffs (R146, 2010) (https://globalfoodlaws.georgetown.edu/wp-content/uploads/2021/12/South-Africa_2010.03.01._Regulations-Relating-To-the-Labelling-and-Advertising-of-Foodstuffs_No.-R.-146_EN.pdf) (regulation copy, checked 2026-10-02)
6. Regulations governing general hygiene requirements for food premises (R638, 2018) (https://www.gov.za/sites/default/files/gcis_document/201806/41730gon638.pdf) (gazette, checked 2026-10-02)



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// NEXT STEP

Start an assessment

# Send us a few packs with good and bad codes

Describe the products, the line and the fault you need caught. We test on your samples and reply with a feasibility note and a budget.