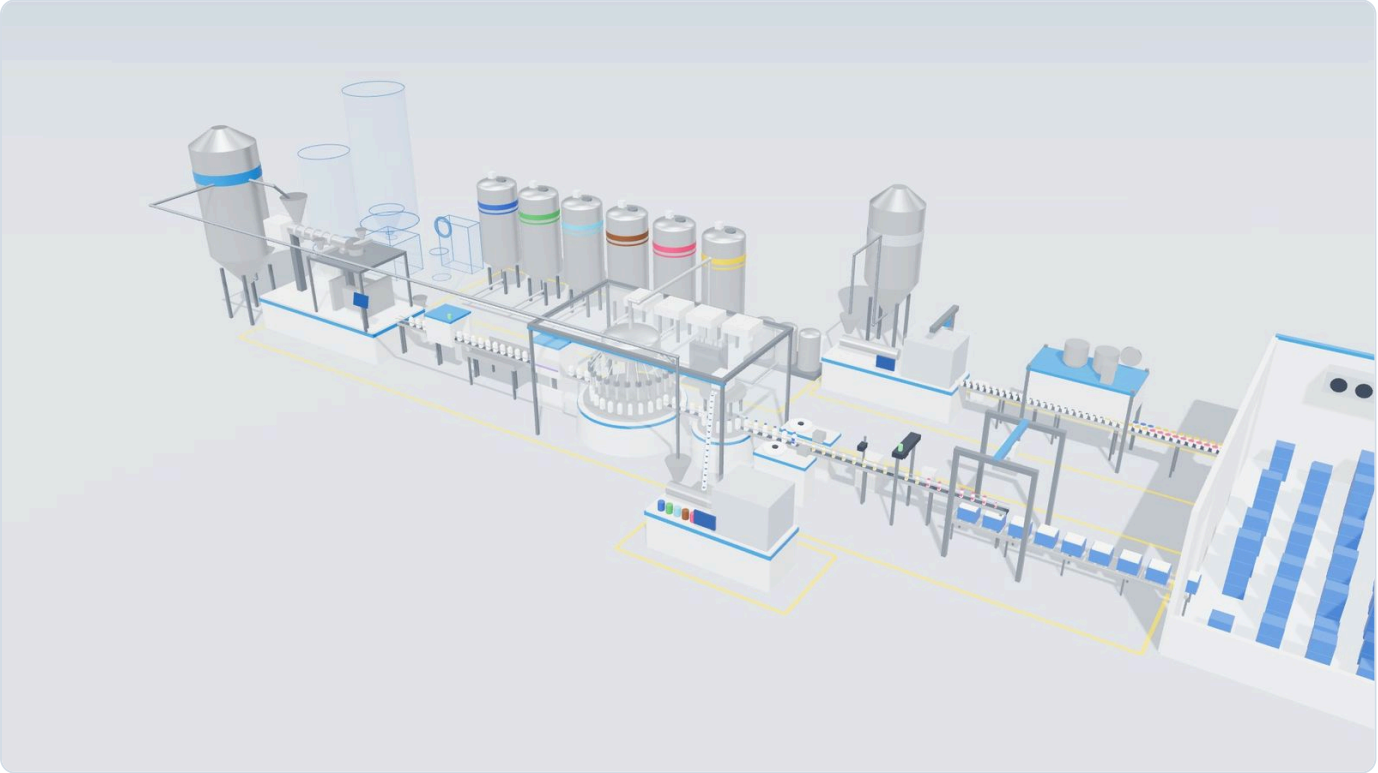
From carton to bottle.

从纸盒到瓶装：吹瓶、制盖、灌装及杯装完整生产线

De Melkcentrale N.V. (MCP) is moving its milk from cartons to its own HDPE bottles. MCP needs one complete line that makes bottles, caps and cups in Paramaribo and fills every dairy product it makes: 25,000 units in one 8-hour shift. This brief explains the line for investors and specifies it for manufacturers. It contains no financial figures.



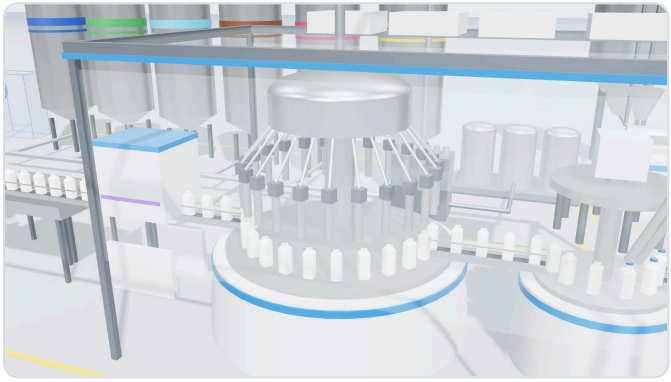
25,000	4,000	2 + 1	3-layer	6	60 Hz
units per 8-hour shift	bottles/h filler at 1000 ml	1000 ml, 250 ml bottle, 500 ml cup	HDPE wall with light barrier	product tanks and cap colours	site power, Paramaribo

THE LINE AT A GLANCE

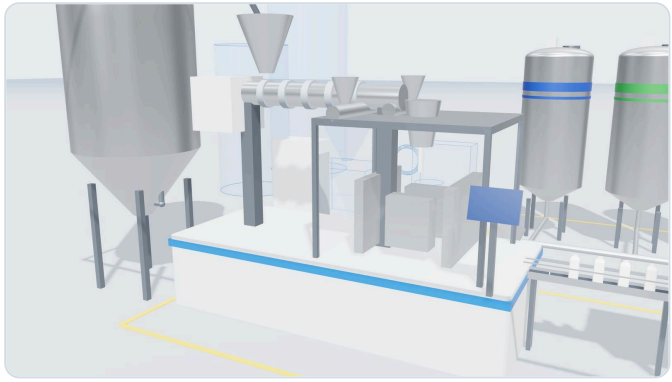
One plant, two packaging lines

一座工厂，两条包装线

Milk from local farms and imported powder leaves MCP's existing process pasteurised and goes into six product tanks. Next to it, the new line blows three-layer HDPE bottles from pellets, moulds caps in six colours and fills, caps, labels, codes and inspects every bottle before it is crated into the cold room. A parallel cup line moulds 500 ml PP cups with in-mould labels and fills them with yoghurt, vla and porridge.



F-502 · Rotary filling under a HEPA hood



BM-201 · HDPE extrusion blow moulding

FOR INVESTORS

What the line changes for MCP

LOCAL PRODUCTION

Packaging made in Suriname

Bottles, caps and cups are made on site from resin. Printed cups now come from Europe, about 394,000 per order and around three months from order to arrival.

QUALITY

Fresher milk on the shelf

A three-layer HDPE wall keeps light away from the milk. Filling runs under HEPA filtered air and every bottle closes with a tamper-evident cap.

RANGE

More products on one line

Six products, two bottle sizes and a 500 ml cup. The 250 ml bottle opens schools and on-the-go sales.

CAPACITY

Room to grow

Sized for 25,000 units in one shift. The filler can run a second shift; blow moulding is the step to plan for when volumes rise.

RISK

Proven equipment

Every machine is a standard type that large dairies run today. Manufacturers quote around four months lead time for a blow moulder.

PEOPLE

Skills on site

The manufacturer installs, commissions and trains MCP operators and technicians in Paramaribo, so MCP runs and maintains the line itself.

PACKAGING

Three formats, one family

三种包装，一个系列



	1000 ml bottle	250 ml bottle	500 ml cup
SHAPE	Square, rounded corners, side grip	Square, rounded corners	Round, tapered, flange rim
SIZE	77 × 77 × 235 mm	≈ 50 × 50 × 150 mm	Ø 103 × 108 mm
CLOSURE	38 mm tamper-evident screw cap	Same 38 mm cap	Heat-sealed foil, snap-on lid
MATERIAL	HDPE, 3-layer light barrier	HDPE, 3-layer light barrier	PP, white
WEIGHT	≈ 35 g	≈ 14 g	Per supplier
DECORATION	Front and back label	Front and back label	In-mould label, 3 designs

≈ values are indicative for sizing; final weight and dimensions follow mould design with the chosen manufacturer.

CAP COLOUR CODE (PROPOSED)

- Whole milk 全脂奶
- Semi-skimmed 半脱脂奶
- Skimmed 脱脂奶
- Chocolate milk 巧克力奶
- Drinking yoghurt 饮用酸奶
- Seasonal special 季节口味

CURRENT RANGE (MCPNV.SR)

Bottled: Magere Melk 1000 ml, Half volle Melk 1000 ml, Koffiemel, Flavomel and Sucamel 900 ml.

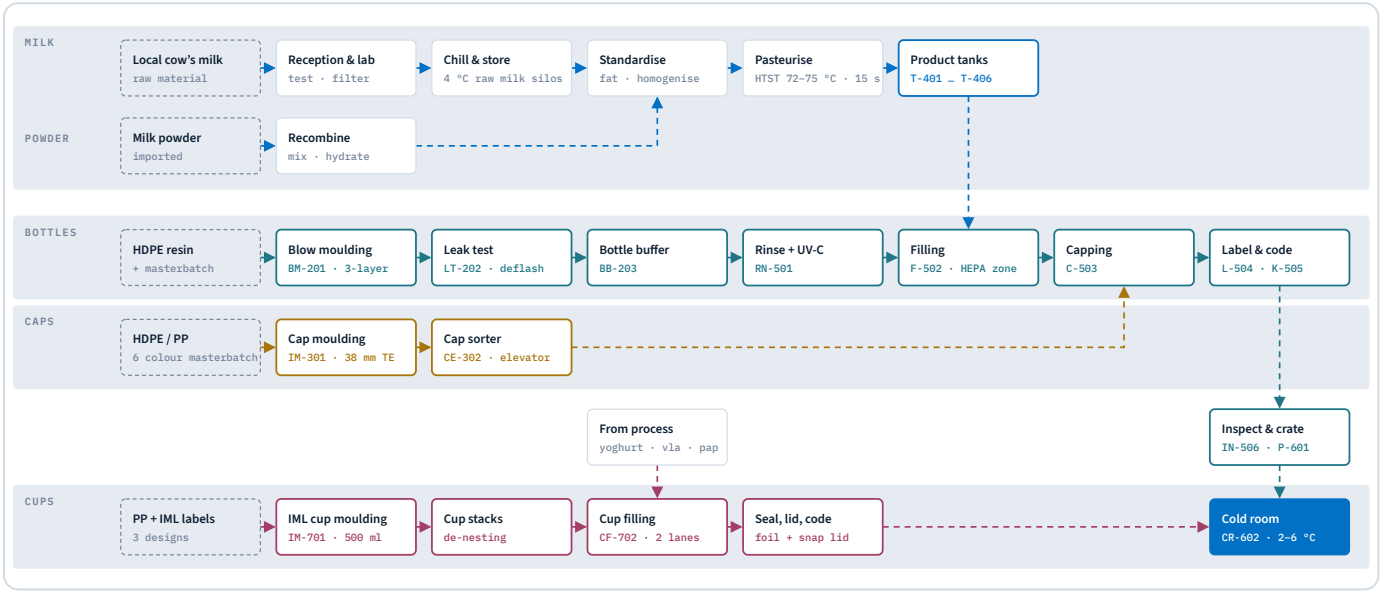
Cups: Yoghurt Naturel 500 ml, Vruchten Yoghurt 250 ml, Choco Vla 250 ml, Magere Yoghurt 125 ml and 250 ml, Griekse Yoghurt 400 g.

PROCESS

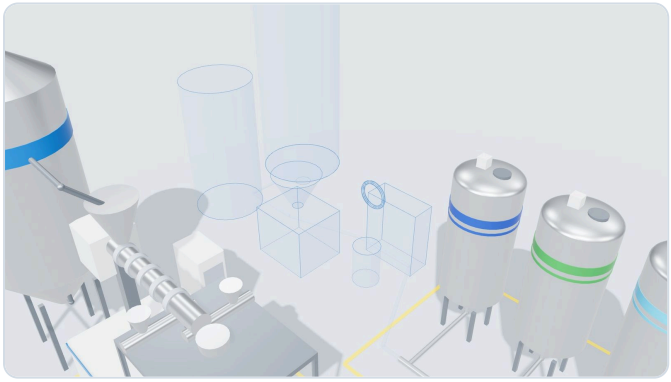
From raw material to finished product

从原料到成品

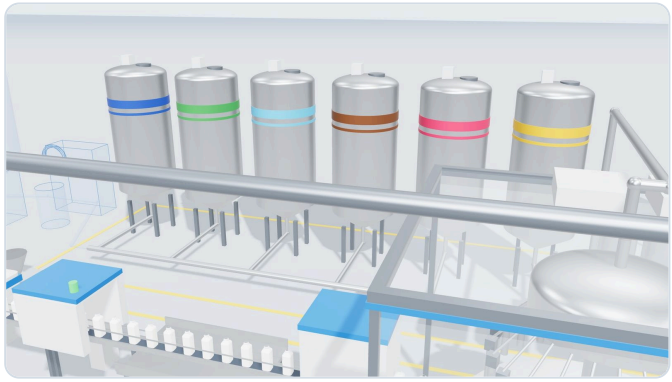
Four material streams meet at the fillers: milk, bottles, caps and cups. Coloured outlines mark equipment MCP asks manufacturers to quote; tags match the specification.



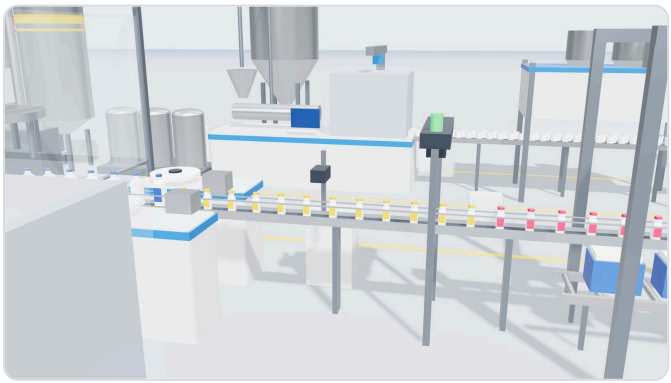
Raw material · MCP upstream process (existing) · Requested equipment · Finished product



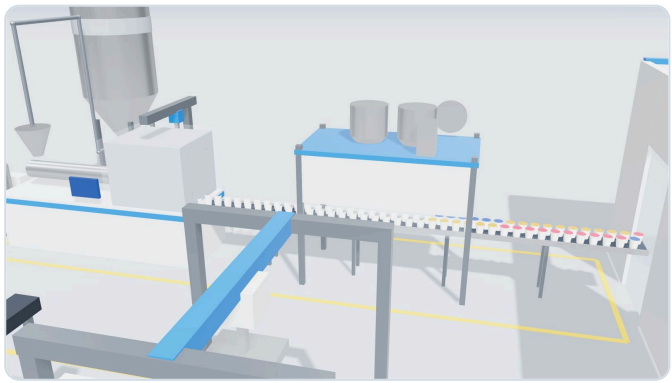
U-01 … U-03 · MCP upstream process, shown outlined



T-401 … T-406 · Six product tanks with CIP



L-504 · K-505 · IN-506 · Label, code, inspect



IM-701 · CF-702 · Cup moulding and filling

CAPACITY

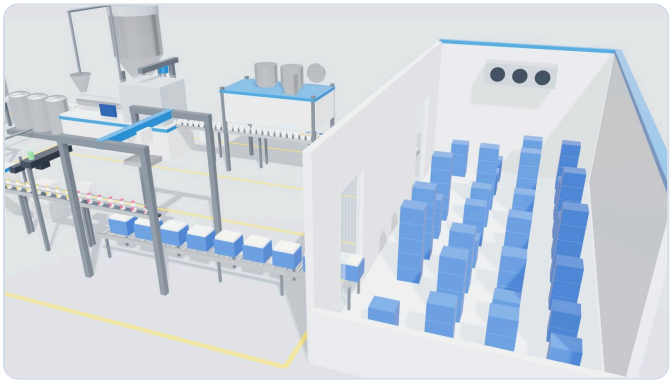
Sized for 25,000 units in one shift

产能：每班25,000件

Sizing basis with an example mix of 70 % 1000 ml and 30 % 250 ml, 80 % line efficiency (OEE) and blow moulding over 16 hours. The interactive calculator on mcp.dataconsept.com recalculates these values for other mixes.

NET OUTPUT **3,125** units per hour over 8 h	FILLER NAMEPLATE **4,000** bottles per hour at 1000 ml	BLOW MOULDING **2,000** bottles/h over 16 h (1,400 + 600)
BOTTLE MIX **17,500** × 1000 ml and 7,500 × 250 ml	MILK FILLED **19,375** litres per shift	HDPE FOR BOTTLES **718** kg per shift (indicative)
CAPS **25,000** per shift, ≈ 75 kg	CUPS **1,500** cups per hour minimum	PRODUCT TANKS **6** at 2–6 °C, mix-proof switching

Assumes ≈ 35 g per 1000 ml bottle, ≈ 14 g per 250 ml bottle and ≈ 3 g per cap. Nameplate rounds up to the next 250 units per hour.



P-601 · CR-602 · Crates into the cold room

OPERATING PATTERN

Filling runs one 8-hour shift. Blow moulding runs 16 to 24 hours into the bottle buffer, so the blowing cell can be smaller than the filler. The filler and capper are sized with headroom for a second shift; blow moulding and cup capacity are then the steps to extend.

Manufacturer feedback on comparable milk bottle lines: double-station machines with 16–18 s cycles at 1000 ml and 14–16 s at 250 ml. At 17 s a 3+3 set-up gives about 1,270 bottles per hour at 1000 ml, so a 4+4 set-up or longer blowing hours meet the target.

TECHNICAL SPECIFICATION · 技术规格

Eight modules, A to H

A至H八个模块

Requirements per module. "Indicative" values come from manufacturer feedback on comparable lines and may be improved in proposals. Manufacturers may quote the full line or single modules; please keep the letters and tags.

A Bottle making 吹瓶系统

SI-101 · BM-201 · LT-202 · BB-203

REQUIRED

HDPE bottles blown on site from pellets, 1000 ml and 250 ml, one 38 mm neck.

MACHINE 机型	Fully automatic extrusion blow moulding machine, double station, hydraulic or electric
MATERIAL 原料	Blow-moulding grade HDPE, food contact, with white and light-barrier masterbatch
BOTTLE WALL 瓶壁结构	3-layer co-extrusion: white / black light barrier / white. Layer ratio by supplier proposal. Mono-layer white as option
ARTICLES 产品规格	1000 ml square, 77 × 77 × 235 mm incl. cap, ≈ 35 g. 250 ml square, ≈ 50 × 50 × 150 mm, ≈ 14 g
NECK 瓶口	38 mm, identical on both bottles, matched to the cap mould
CAVITIES 腔数	Indicative: 3+3 or 4+4 for 1000 ml, 4+4 for 250 ml. One machine with mould change also accepted
CYCLE TIME 成型周期	≈ 16–18 s at 1000 ml, ≈ 14–16 s at 250 ml
OUTPUT 产量	⩾ 1,400 bottles/h at 1000 ml and ⩾ 600 bottles/h at 250 ml over 16 h, or the same daily total within 20 h. At 17 s a 3+3 set-up gives about 1,270 bottles/h
EXTRUDER 挤出机	Plasticising capacity ⩾ 70 kg/h HDPE on the 1000 ml machine
INCLUDED 配套	Vacuum loader, masterbatch dosing, moulds, automatic deflashing and take-out, flash conveyor and grinder for regrind, mould chiller
LEAK TEST 测漏	In-line multi-head leak tester on 100 % of bottles, automatic reject
BUFFER 缓冲	Bottle buffer or bag-out, so blow moulding can run 16 to 24 h while filling runs 8 h

B Caps 瓶盖系统

REQUIRED

IM-301 · CE-302

38 mm tamper-evident screw caps in six product colours.

MACHINE 机型	Injection moulding machine with hot-runner cap mould. Compression moulding accepted
CAP 瓶盖	38 mm screw cap with tamper-evident band, HDPE or PP, ≈ 3 g
NECK FINISH 瓶口标准	Supplier proposes a standard 38 mm dairy neck finish that both bottle and cap moulds follow
COLOURS 颜色	6 colours by automatic masterbatch dosing; colour change without mould change
CAVITIES 腔数	Indicative 16 to 24
OUTPUT 产量	⩾ 25,000 caps per shift
INCLUDED 配套	Cap conveyor, sorter and elevator to the capper, UV-C treatment at the chute
OPTION 选项	Bought-in caps from supplier stock instead of in-house moulding

C Product tanks and CIP 储罐与CIP清洗

REQUIRED

T-401 … T-406 · VM-407 · CIP-408

Six ready products at 2–6 °C, switched to the filler without mixing, cleaned automatically.

TANKS 储罐	6 insulated, jacketed buffer tanks, 316L, indicative 3,000 to 6,000 L each
FITTINGS 附件	Agitator, level and temperature sensors, CIP spray ball, sample valve, manway
TEMPERATURE 温度	2–6 °C at the filler
SWITCHING 切换	Mix-proof valve manifold to the filler; product change in under 15 min with product push-out
CIP CIP清洗	Automatic 3-tank CIP (caustic, acid, water) with recovery, temperature and conductivity control, for tanks, pipes, bottle filler and cup filler
CONTROL 控制	PLC with a recipe per product and batch records

D Filling and capping 冲瓶、灌装、旋盖

REQUIRED

RN-501 · F-502 · C-503

Rinse, fill and cap in a HEPA clean zone at 4,000 bottles per hour.

RINSER 冲瓶	Ionised or sterile air rinse with UV-C tunnel
FILLER 灌装机	Rotary, ⩾ 24 valves, electronic flowmeter or weighing; gravity-vacuum accepted
SPEED 速度	4,000 bottles/h at 1000 ml; ⩾ 6,000 bottles/h at 250 ml
ACCURACY 精度	±0.5 %
FILL 灌装方式	Cold fill at 2–6 °C: fresh pasteurised milk, flavoured milk, drinking yoghurt
CAPPER 旋盖机	Rotary screw capper, 6 to 8 heads, magnetic torque control
CLEAN ZONE 洁净区	HEPA laminar flow hood, ISO 5 (class 100), over filler and capper
CHANGE PARTS 换型件	For 1000 ml and 250 ml; changeover ⩽ 30 min
INTERLOCKS 联锁	No bottle, no fill; no cap, line stop; CIP-ready product path

E Labelling and inspection 贴标、喷码、检测

REQUIRED

L-504 · K-505 · IN-506

Front and back labels, date code and a camera check on every bottle.

LABELLER 贴标机	Self-adhesive front and back labels on square bottles, speed matched to the filler
CODER 喷码机	CIJ inkjet or laser: best-before date, lot and time
INSPECTION 视觉检测	CCD vision: fill level, cap present, cap colour against product, label present and position, code readable
REJECT 剔除	Automatic reject with confirmation sensor and counter

F End of line 后段装筐与冷库

OPTION

P-601 · CR-602

Bottles into crates and straight into cold storage.

CRATE PACKER 装筐机	Pick-and-place gantry; crate size per MCP distribution crate, confirmed at site survey
CONVEYING 输送	Crate conveyor into the cold room
COLD ROOM 冷库	New cold room at 2–6 °C as option, or connection to MCP's existing cold store
OPTION 选项	Shrink-wrapped trays for retail

G Cup line 杯装生产线

IM-701 · CF-702

REQUIRED

500 ml PP cups moulded with in-mould labels, then filled, sealed and lidded.

MOULDING 注塑	IML injection moulding system: machine, 500 ml cup mould, side-entry robot, label magazine
CUP 杯型	PP, 500 ml, Ø 103 × 108 mm, 3 label designs (fruit yoghurt, vanilla vla, plain yoghurt)
OUTPUT 产量	⩾ 1,500 cups/h
FILLER 灌装封口机	Linear cup filling and sealing machine, 2 lanes, expandable to 4
DOSING 计量	Piston filler with option for fruit pieces; yoghurt, vla (custard) and porridge
CLOSING 封口	Die-cut aluminium foil lid, heat sealing, snap-on lid, date coding
HYGIENE 卫生	UV-C for cups and lids, CIP-ready product path
LATER FORMATS 后续规格	Format parts for 125 ml and 250 ml cups

H Utilities and services 公用工程与服务

Air · cooling · site

REQUIRED

Everything the line needs to run in Paramaribo, plus people trained to run it.

POWER 电源	60 Hz, three-phase; voltage confirmed at site survey
COMPRESSED AIR 压缩空气	Low pressure for the line, high pressure for blowing, with dryers
COOLING 冷却	Chillers for moulds and process, sized for 35 °C ambient
CONTROLS 控制系统	PLC and touch HMI per machine in English; line signals between machines
DOCUMENTS 技术文件	Layout, P&ID, electrical drawings and manuals in English
SERVICES 服务	Installation, commissioning, operator and maintenance training on site, two-year spares, remote support

BOTTLE TECHNOLOGY

HDPE preferred, PET welcome

	HDPE, extrusion blow moulding PREFERRED	PET, stretch blow moulding
STARTS FROM	HDPE pellets, made into bottles on site	Preforms, bought in or moulded on site
BOTTLE	Opaque white, 3-layer light barrier	Clear or white, needs a light barrier for milk
TYPICAL SET-UP	Blow moulder and leak tester, buffer to filler	Blow-fill-cap block, compact and fast
RECYCLING CODE	HDPE 2	PET 1
FIT FOR MCP	Matches the bottle concept in this brief	Accepted as an alternative proposal

SITE AND DESIGN BASIS

Built for Paramaribo

SITE Van Idsingastraat 125, Paramaribo, Suriname	POWER 60 Hz, three-phase. Voltage confirmed at site survey
CLIMATE Design for 35 °C ambient, up to 90 % RH	HYGIENE Stainless 304, 316L in product contact, CIP on all product paths
DELIVERY CIF Paramaribo, installation and commissioning on site	LANGUAGE English manuals and HMI, Dutch HMI as option
TRAINING Operators and maintenance staff, on site	SPARES Two years of recommended spares, listed separately

FOR MANUFACTURERS · 致设备制造商

The answers you usually ask for

贵司询价时常问的问题

This brief updates our enquiry of October 2026 (330 ml and 900 ml, about 4,000 bottles per day). The formats are now 1000 ml and 250 ml, at 25,000 units per shift.

本资料更新了我们2026年10月的询价（330毫升与900毫升，每天约4,000瓶）。现规格为1000毫升与250毫升，每班25,000瓶。

Daily operating hours	Filling 8 h per day (one shift). Blow moulding up to 16–24 h into the bottle buffer.
Output	25,000 bottles per 8-hour shift, 1000 ml and 250 ml together. Cups ⩾ 1,500 per hour.
Split between sizes	Example 70 % 1000 ml and 30 % 250 ml. All machines must run both sizes.
Growth	MCP plans a second filling shift as demand grows. Please show how your configuration scales.
Bottle data	Concept dimensions and weights are in this brief. Final drawings are made with the selected supplier.
Wall structure	3-layer light barrier preferred (white / black / white). Please propose the layer ratio.
Neck and cap	One 38 mm neck for both bottles. Bottle mould and cap mould must match.
Power and site	60 Hz three-phase. Tropical site, design for 35 °C ambient and up to 90 % RH.

每日运行时间	灌装每天8小时（一班）。吹瓶每天最多16–24小时，瓶子进入缓冲储存。
产量	每8小时班产25,000瓶（1000毫升与250毫升合计）。杯装每小时不少于1,500杯。
规格比例	示例：1000毫升占70%，250毫升占30%。所有设备须兼容两种规格。
产能增长	随需求增长，MCP计划增加第二班灌装。请说明贵司方案如何扩产。
瓶型数据	本资料提供概念尺寸和克重。最终图纸与中标供应商共同确定。
瓶壁结构	优选三层遮光结构（白/黑/白）。请建议各层比例。
瓶口与瓶盖	两种瓶型统一38毫米瓶口。瓶模与盖模必须匹配。
电源与现场	60赫兹三相电。热带气候，按环境温度35°C、相对湿度最高90%设计。

NEXT STEP · 下一步

What we ask you to send

请提供以下资料

01	Line proposal per module A to H, with layout drawing and footprint 按A至H模块提供方案，附布局图及占地尺寸
02	Budget price CIF Paramaribo, split per module 到帕拉马里博的CIF参考价格，按模块分列
03	Moulds: 1000 ml and 250 ml bottle, 38 mm cap, 500 ml IML cup, with lead time 模具：1000毫升与250毫升瓶模、38毫米盖模、500毫升模内贴标杯模，及交货期
04	Rated output per machine and utility use: kW, compressed air, cooling water 每台设备额定产量及能耗：功率、压缩空气、冷却水
05	Lead time, installation and commissioning plan 交货期、安装及调试计划
06	References: comparable dairy lines in operation 业绩：正在运行的类似乳品生产线
07	Warranty, remote support and two-year spares list 质保、远程支持及两年备件清单

TIMELINE · 时间安排

NOW TO DECEMBER 2026

Manufacturers send proposals and budget prices.

即日起至2026年12月：请发送方案及参考报价。

EARLY JANUARY 2027

Factory visits in Guangzhou. Exact dates follow.

2027年1月初：赴广州参观工厂，具体日期另行通知。

AFTER THE VISITS

Shortlist, final specification and order.

参观后：确定入围名单、最终规格并下单。

CONTACT · 联系方式

Dataconsept Network N.V., sourcing partner for MCP

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info@dataconsept.com

3D line, film and this brief: mcp.dataconsept.com