

Thimonnier

FILLING MACHINES FOR LIQUID AND VISCOUS PRODUCTS



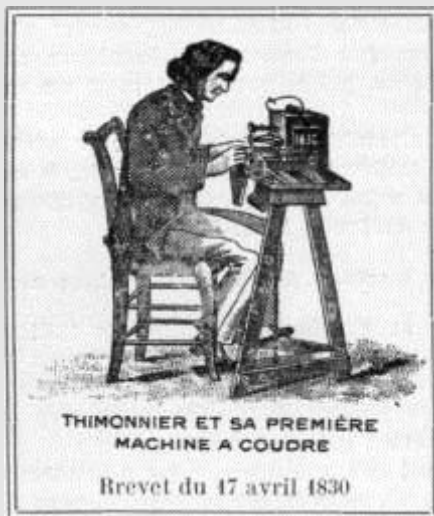
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PRESENTATION OF THIMONNIER COMPANY



MORE THAN 180 YEARS OF CREATION AND EVOLUTION



INVENTION

- **THE FIRST SEWING MACHINE**
- Patent : April 17th 1830

EVOLUTION

- **WELDING MACHINE FOR PVC RAINCOATS**
- 1947 : « No more stitch, no more leaks »



50 years of R&D for innovation purpose

Flexible packaging for liquid & viscous products

1951: Berlingot or Softpack



The first refill pouch concept for cleaners, bleach...

1957: Pillow pouch



For pasteurised or UHT milk, drinks, water, cooking oil

1962: DOYPACK



Stand-up pouch
DOYen PACKaging
Invented by Louis Doyen

1964: I.V. Bags



PVC bags replace rigid or semi-rigid containers

Thimonnier today



Employees : 75
Turnover : 15 M€



+ 1000 machines under operation
distributed in + 100 countries



Multinational key accounts : Nestlé,
Danone, Campina, Mars, Unilever, Coca Cola,
Dairy Crest, Parmalat, Heinz,...



International network of technical &
commercial partners

PILLOW POUCH PACKAGING MACHINES



Fruit juices, flavoured drinks, milk, drinking yogurt... in pillow pouches

**Our
solution**

- Vertical « FFS » machine working from LDPE reels

- **Production output:**
1200 to 1800 bags / hour

- **Pouch size:** 100 to 1000 ml

- Gravity filling for liquids and continuous pumps for viscous products

- Shelf life : depends on product nature

M1100



Your local agent: Sepak Industries Pty Ltd

Pasteurized milk and drinking yogurt



M1500



M2500



M3200



M5200

LARGE RANGE OF SOLUTIONS

M1500

DESCRIPTION



- Vertical « FFS » machine working from LDPE reels
- **Production output:**
1800 to 2500 bags / h
- **Pouch size:**
100 to 1000 mL
- Lobes pumps filling for condensed milk
- Peristaltic pump for Cuajo (milk curdling enzyme / rennet)
- Shelf life : depends on product nature



APPLICATION



COLUN Chile M1500 ESL
2500 pouches / hour (200 cc)
Product : Fresh cheese (for Cottage cheese...)

M3200

DESCRIPTION



- Automatic « FFS » machine running with reels of PE
- **Production output:**
5000 to 7200 pouches/h
- **Pouch sizes:**
100 to 2000 mL
- Gravity filling device for liquids and pump filling device for viscous products
- Shelf life : depend on product
- Optional automatic **packer in line**
- Optional ultra-clean device for **ESL milk**

Your local agent: Sepak Industries Pty Ltd

APPLICATION



DANONE Buenos Aires

6000 pouches / hour
Product : drinking yogurt

M2500



- Automatic « FFS » machine running with reels of PE
- **Production output:** 5000 pouches / h
- **Pouch sizes:** 100 to 1000 mL
- Gravity filling device for liquids and pump filling device for viscous products
- Shelf life : depend on product
- Optional automatic packer in line

M5200



- Automatic « FFS » machine running with reels of PE
- **Production output:** 7200 to 10000 p/h
- **Pouch sizes:** 100 to 2000 ml
- Gravity filling device for liquids and pump filling device for viscous products
- Shelf life : depend on product
- Optional automatic **packer** in line
- Optional ultra-clean device for **ESL** milk

M5200 : 10 000 pouches / hour



YOTVATA DAIRY
Israël



**18° angled
transversal seal**



**Bag counting for
automatic bagger**



**Packs of 6 bags in
plastic crates**

UHT Milk in Pillow pouch

Our
solution

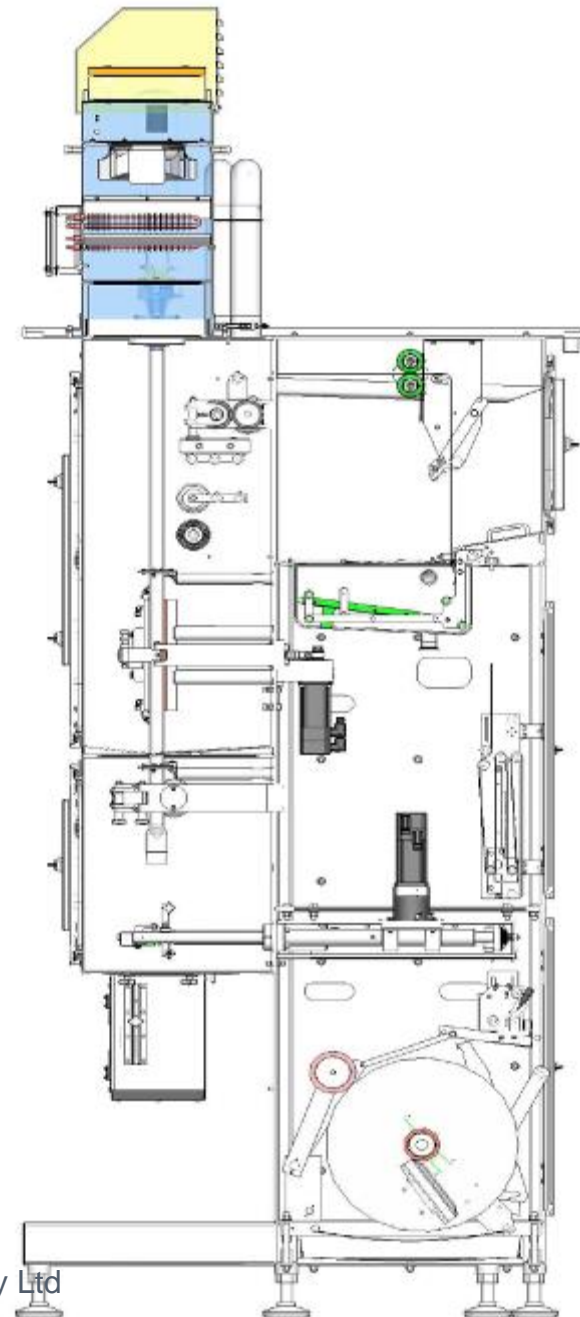


THP7200 AS



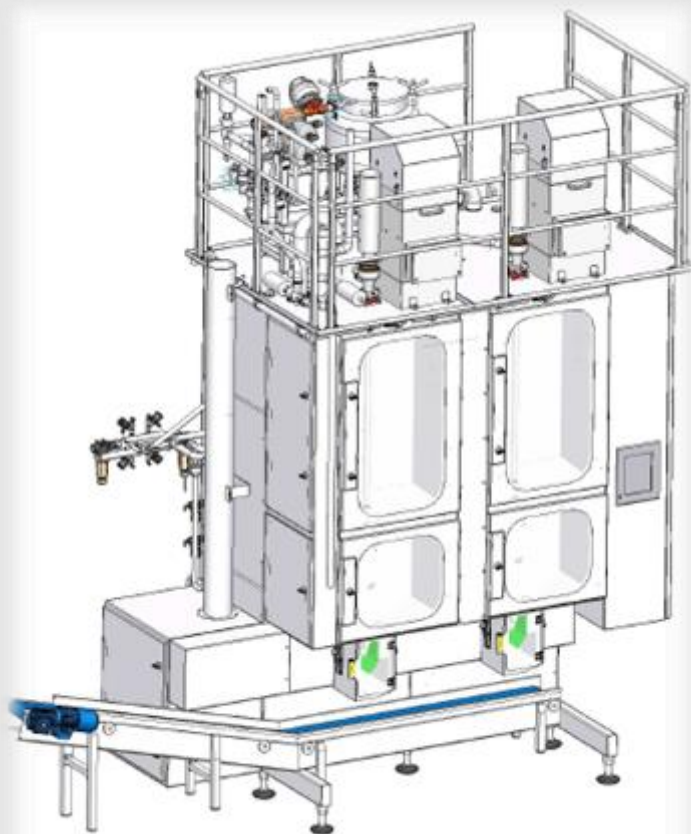
- Vertical « FFS » aseptic machines working from high oxygen barrier LDPE co-extruded film reels
- **Production output:**
 - THP 7 200 : 6000 to 9000 p/h
 - THP 10800 : 9000 to 12000 p/h
- **Size of the bags:**
THP 7200 : 100 to 1000 ml
- Gravity filling for liquids
- **Shelf life:** 4 weeks to 6 months depends on film quality

THP 7200 AS SECTION



MACHINE THP 7200 AS

General Performance



PRODUCTION

- Up to 6 000 pouches/h in 1 L bag
- Up to 9 000 pouches/h in 200 mL bag

BAG VOLUME RANGE

- From 100 mL to 1 000 mL without tool alteration

CONSTRUCTION STANDARTS

- 3A & EHEDG (European Hygienic Equipment Design Group) standards

MACHINE THP 7200 AS

Technology



FILM TRACKING

- Servo-motors technology
- Continuous unwinding of the reel

DATE CODING

- Hot roll stamping
- Inkjet coder

IMPULSE SEALING TECHNOLOGY

- Digital control of sealing jaw's motion (servo-motors technology)
- Digital control of sealing temperature



MACHINE THP 7200 AS

Technology



ASEPTIC QUALITY

- Film path shielded from mechanical components & moving parts
- Continuous sterilization of the film in a hot hydrogen peroxide bath (45°C)
- Positive pressure of sterile air in the filling chamber & tank (ULPA filter class 10)
- Semi-sterile «lock-chamber » between bag drop and horizontal sealing jaws



DOSING ACCURACY

- 2 g standard deviation
- Tank level control done by capacitive probe

MACHINE THP 7200 AS

Technology

**100%
DIGITAL
MACHINE**

- BR Automation
- All parameters adjustable via touch screen
- Defect identification and maintenance operation reminders

**OPTIONS
AVAILABLE**

- CIP automatic or semi-automatic
- Automatic packer
- Modem for RAS connection
- ...



MACHINE THP 7200 AS

Film specification

SHELF LIFE

- **4 weeks:** co-ex of a 3 layers film of LDPE, including a black layer for U.V. protection
- **3 months:** co-ex of 5 layers film type LDPE/LDPE/EVOH/LDPE/LDPE

FILM WIDTH

- 324 mm +/- 1 mm

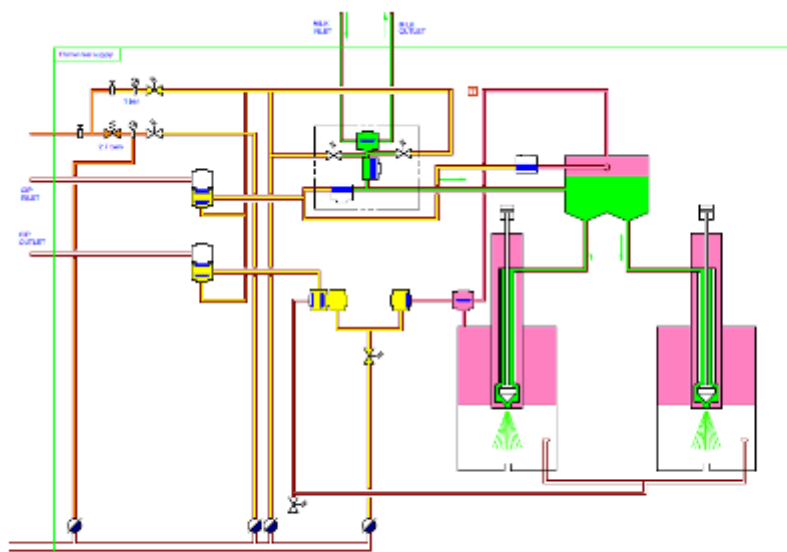
ROLL

- Roll ext. Diameter : 500mm
- Roll int. Diameter : 76 mm

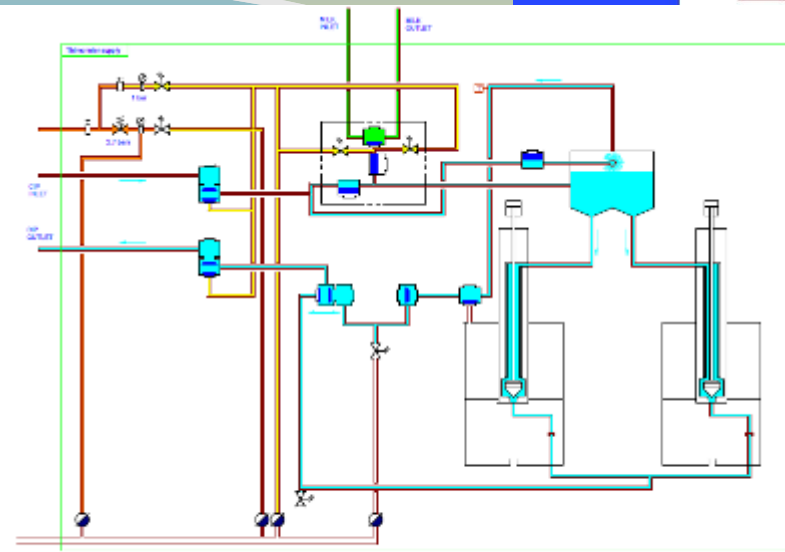
BAG

- Thickness : from 80 to 100 μ m +/- 5 %
- Approx bag width : 162 mm
- Approx bag length :
 - 1 litre bag : 240 mm
 - 1/2 litre bag : 160 mm
 - 1/4 litre bag : 120 mm





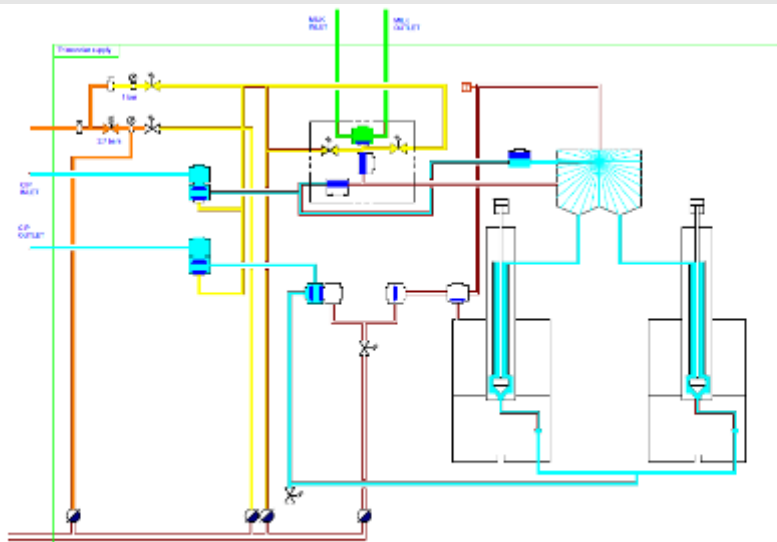
Wash off
Wash
Cleaning water
Steam 2.7 bar
Steam 1 bar



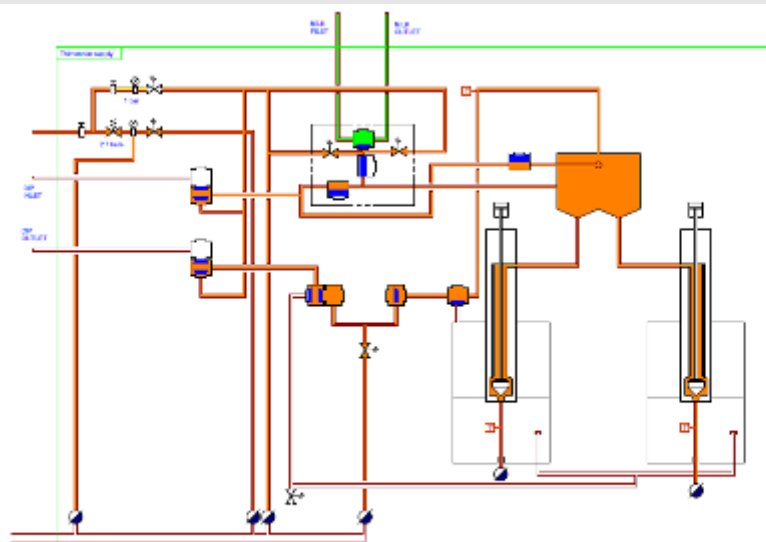
Wash off
Wash
Cleaning water
Steam 2.7 bar
Steam 1 bar

THP7200	PRODUCTION CYCLE	525700.79
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THP 7200	CIP	525700.79
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Wash off
Wash
Cleaning water
Steam 2.7 bar
Steam 1 bar



Wash off
Wash
Cleaning water
Steam 2.7 bar
Steam 1 bar

THP 7200	CIP TOP OF TANK	525700.79
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THP 7200	SIP	525700.79
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DOYPACK® PACKAGING MACHINES



DOYPACK® SOLUTIONS

Range of Doypack packaging possibilities

Liquid & viscous products DOYPACK® stand-up bags



Drinking yogurt in DOYPACK® bags



Sterilized milk in DOYPACK® bags



- Filling on semiautomatic or automatic machines

- Pasteurized milk fed from a refrigerated tank
- Retort bags sterilized after filling at 120°C in autoclave
- Shelf life : 12 month (at room temperature)
- Example : SOLMAC (Philippines)

THD 800

- Pouch sizes:

50 ml to 2 litres

- Production output:

Duplex: 50- 250ml: 5000- 6000 p/h

Mono: 250ml - 2 lt: 1500- 3000 p/h

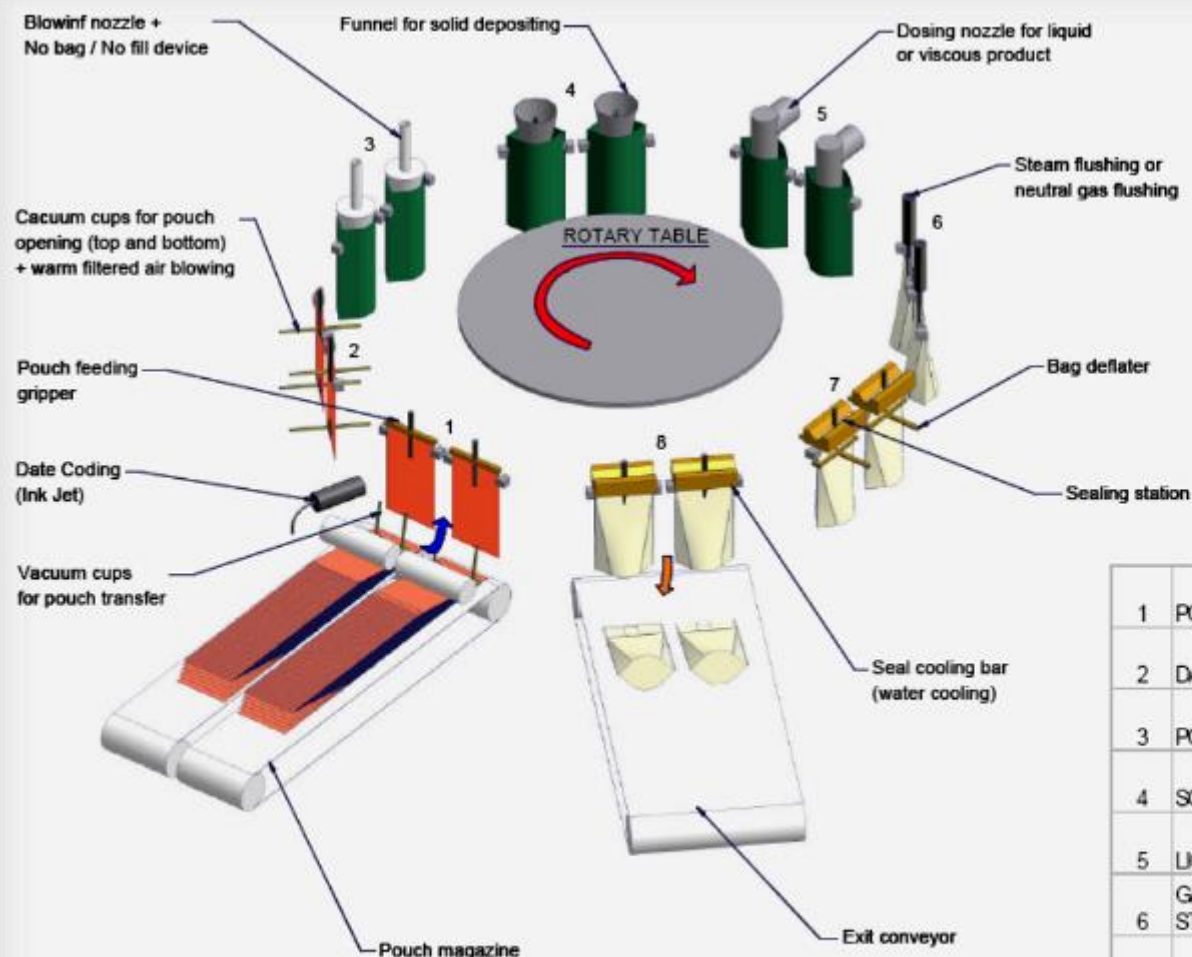
- Up to 3 filling stations: Filling of liquid, viscous or solid products

- Optional : Ultraclean



Your local agent: Sepak Industries Pty Ltd

THD Series : Basic principle



1	POUCH FEEDING
2	DATE PRINTING AND POUCH OPENING
3	POUCH OPENING / DETECTING
4	SOLID PRODUCT FILLING
5	LIQUID FILLING
6	GAS / STEAM FLUSHING / BAG STRETCHING
7	DEFLATING DEVICE AND SEALING
8	SEAL COOLING / DISCHARGING

THD 800 : Working Machine Principle

Your local agent: Sepak Industries Pty Ltd

Thimonnier *your packaging engineering partner*



THD900 MONO - DUO - TRIO

NEW GENERATION OF DOYPACK® MACHINE



POUCHES / SACHETS
50 ML - 5 L

FILLING - SEALING MACHINE FOR DOYPACK®

FULLY MECATRONIC MACHINE - For liquid, viscous & solid products

REMP LISSEUSE - SOUDEUSE POUR DOYPACK®

ENTIÈREMENT PILOTÉE PAR SERVO-MOTEURS - Pour produits liquides, visqueux & solides

OUTPUT / CADENCE : 135 POUCHES / MIN - 135 SACHETS / MIN

THD 900 Mono/ Duplex/ Triplex

3 Modes in 1 Machine:

Triplex: 50ml- 400ml : 3 pouches/cycle

Duplex: 400ml – 2lt : 2 pouches/ cycle

Mono: 2lt – 5lt : 1 pouch/ cycle

Production rate:

30 – 40 cycles/ minute in Mono

3 filling stations + 1 neutral gas/ steam injection station + 2 sealing stations + 1 cooling-sealing

Servomotor technology: All the machine movements driven by servomotors



Main advantages of THD Series

High hygienic & sanitary standard with easy cleanability:

- Hygienic design of the filling area to avoid any unclean area
- Complete accessibility to the turret for cleaning operations of the filling area
- Liquid proof table with slope & collection of the cleaning waste water



Case study : NESTLE DE COLOMBIA



Nestle Good Food, Good Life

Technical specifications

PRODUCTS TO BE FILLED

Sweet condensed milk
Retortable cream



SHAPED DOYPACK POUCH WITH SPOUT (90 & 186 gr)



SPEED

60 to 80 ppm

ULTRA-CLEAN MACHINE

ULTRASONIC SEALING DEVICE

Case study : NESTLE DE COLOMBIA

OUR SOLUTION

Machine model **TD1000** with 12 working stations with

- Pick & place device for DOYPACK® pouch with spout
- Specific gripper allowing to handle pouch with or without spout
- Detection of the good position of the pouch into the grippers with optical fiber
- Opening of the bags with sterile air
- Detection of the good opening of the pouch; if no pouch or bag opening, no fill
- 2 dosing stations with specific dosing nozzles for sweet condensed milk & cream
- 2nd detection of pouch
- Ultrasonic sealing station
- Cosmetic sealing station
- Hygienic design of all the parts on the carrousel
- Dosing devices using 2 electromagnetic flow meters with CIP & SIP connections.
- Laminar flow on the machine and on the in-feed conveyor



Case study : NESTLE DE COLOMBIA



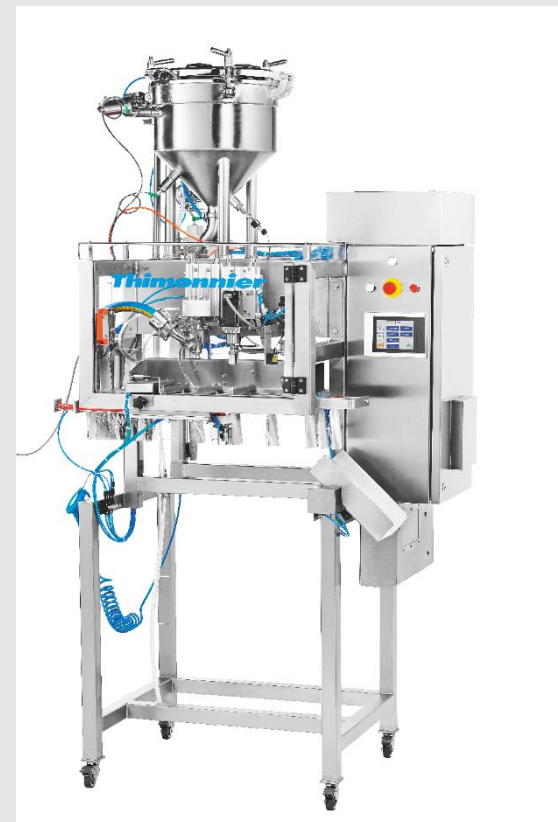
SPOUT FILLING AND CAPPING MACHINE FOR DOYPACK®



SF Series: 20 to 240 pouches/min

SF10 : Semi-automatic model

- Production rate: up to 20 ppm
- Pouch size: 90ml – 2 liter (same spout Ø)
- Adapted to start a new product or for small scale of productions
- Automatic pouch advance, filling, capping and test of cap tightness by laser
- Manual loading of empty pouch and caps



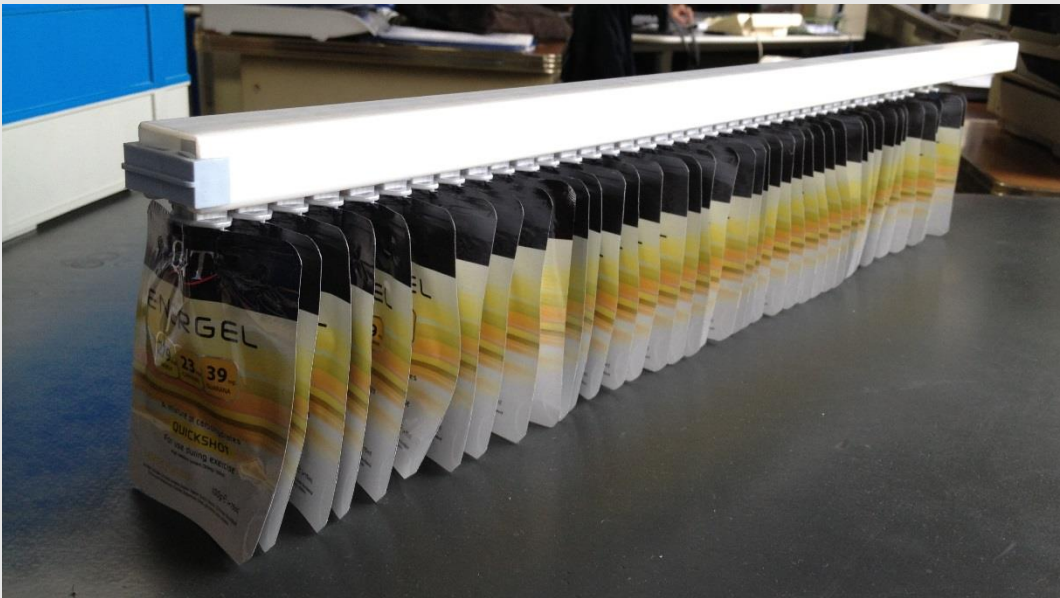
SF100 : 1 automatic line

- Production rate: up to **40 ppm**
- Pouch size: 90ml – 2 liter (same spout Ø)
- Loading with preloaded rails. Automatic pouch advance, date coding, filling, capping and test of cap tightness by laser
- Rockwell PLC



SF100

Pouch loading with preloaded rails :
Automatic rail distributor as option



SF102 : 1 DUPLEX automatic line

- Production rate: up to **80 ppm**
- Pouch size: 90ml – 2 liter (same spout Ø)
- Pouch loading with preloaded rails : Automatic rail distributor as option.
- Automatic pouch advance, date coding, filling, capping and test of cap tightness by laser
- Rockwell PLC

Your local agent: Sepak Industries Pty Ltd



SF102 : 1 DUPLEX automatic line

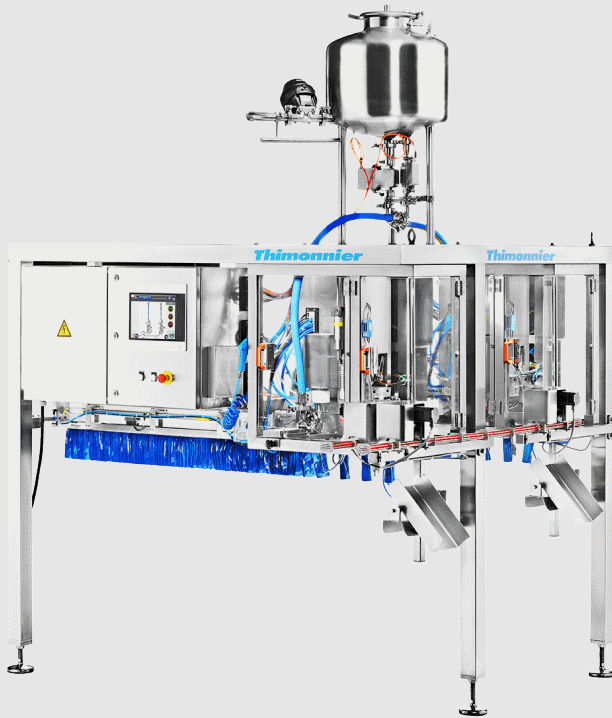


2 filling and 2 capping
stations in 1 line for
production of 2 pouches
simultaneously



- Ultra-clean version :
Laminar air flow, SIP filling system, cap disinfection
before capping

High capacity : SF202 – SF302



SF202:

- 2 parallel DUPLEX lines: 4 pouches / cycle
- Production rate: Up to 160 pouches/ min

SF302:

- 3 parallel DUPLEX lines: 6 pouches / cycle
- Production rate: Up to 240 pouches/ min

Thimonnier

