



CARUGIL

Lollipop Lines

The Company

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**Over 50 years at the service of
our customers**

We provide to the Confectionery and Food industries the most advanced technological equipment in the market, contributing to the improvement of well-being and quality of people's life.

A brief history

CARUGIL was established in 1971 to provide service to the local confectionery companies which spread around the city of Murcia in the late 70's.

Early In the 80's, CARUGIL began to develop its own designs and commercialize machinery for the Confectionery and Food Industries. CARUGIL is now firmly established as one of the world's leading specialists in high-quality machines for the Confectionery and Food Industries.

With the market showing rapid growth in both size and diversity, we continue to consolidate our position with machines that integrate excellence in technology with new, cutting-edge software applications. Such integration inevitably transcends the traditional boundaries of development, design and production, and is taking CARUGIL forward into exciting and challenging new areas of business.

Research & Development

Research and development plays an essential role within the Carugil's corporate philosophy (a high percentage of our turnover is dedicated annually to I+D+i). Our R&D team thoroughly studies each new project in order to design and develop mechanical systems which answer our customers' needs.

The work in Research & Innovation would not be possible without testing new ideas and process technologies. To this aim, CARUGIL has its own PLANT for performing all kinds of tests simulating the most diverse conditions and providing our customers the possibility of testing the performance of the machines with their own recipes.

Small details, big differences!

Quality and reliability are part of our DNA: Carugil supplies machines that have been developed to perfection and really add value to the products of our customers.

Operational reliability and a long service life are also important distinctive values. And last but not least: we are principally guided by market development and our customers' wishes and needs.



Project Life Cycle

1 Design & Engineering

A team of engineers, designers and software programmers are responsible for putting together all the ingredients that will give life to our new designs and applications.



2 R&D Project Development

Research and development plays an essential role within the Carugil's corporate philosophy. A high percentage of our turnover is dedicated annually to I+D+i. Our R&D team thoroughly studies each new project in order to design and develop mechanical systems which answer our customers' needs.



3 Manufacturing & Quality Control

Our facilities include CNC machines and high precision tools which allow for accurate manufacturing the parts of our machines. Our integrated QC System ensures that all the parts manufactured accomplish with the most demanding quality standards.



4 Assembling

All of our machines and systems are assembled on site as we provide all fixtures and fittings ourselves. We carry out the entire assembly procedure in order to maintain high standards of quality, accuracy, durability and finish.



How we work

5 Testing & Commissioning

A special group of engineers designated to carry out tests on all installed machines and applications. These engineers ensure that all machines and components are correctly installed, tested, operated and commissioned according to the specifications and customer's requirements.



6 Customer Support, parts and maintenance

Our service increases the service life and minimises failure of your machines, and improves the quality of your products. To guarantee this, the highest quality parts are available. Carugil can advise you on this based on your daily needs.



CORE COMPETENCES

Food & Confectionery

Complete processing lines

Carugil is one of the World's leading suppliers of high innovative process and packaging solutions for Confectionery and Food sectors.

Whatever requirements, Carugil continuously strives to develop new standardised and custom systems solutions.



Machinery INDEX

Our portfolio

- **Lollipop lines**
 - › Pre-forming line Pg. 18
 - › Pop formers Pg. 20
 - › Pop coolers Pg. 22
 - › Sugar sanders Pg. 24
 - › Bunch wrappers..... Pg. 26
 - › 4-Sides seal wrappers ... Pg. 28
 - › Flow wrappers Pg. 29
 - › Stickpack wrappers Pg. 30
- **Ball forming lines**
 - › Kneaders
 - › Extruders
 - › Ball formers
 - › Cooling tunnels
 - › Coating pans
 - › Flow-wrappers
- **Cut & Wrap lines**
 - › Kneaders
 - › Extruders
 - › Cooling tunnels
 - › Flow-wrappers
 - › Cut & Wrap machines ...
 - › Multilane wrappers

Our Turn-key lines guarantee your success

For over half a century, Carugil has been the leading specialist in developing and manufacturing machines and complete processing lines from A to Z for the Confectionery and Food industry. We have a wealth of knowledge and experience in both mechanical and electronic engineering and technology related to such sectors. This is one of the reasons why Carugil is one of the world's leading companies in Confectionery and Food-processing equipment.

● Lollipop lines

For solid and center-filled lollipops in Bunch, Twist wrap, 4-Side Seal, Flow-pack and Stickpack styles.



● Ball forming lines

For bubble-gum, soft candy, toffee and fruit pastes.



● Cut & Wrap lines

For bubble-gum, soft candy, toffee and fruit pastes.





CARUGIL

Lollipop Lines

Turnkey lines. We take care of everything



CARUGIL lollipop lines

Endless possibilities

Solid and filled lollipops

Our lines allow to produce flavourful lollipops, solid or with different fillings such gum, chews, powder, granulates and chocolate.



Eclair lollipops

Our Pop Formers include specific features engineered to improve their performance when working with eclairs, which guarantees both reliability and smoothness in the forming process.



Ball and 3D lollipops

Make your lollipops stand out in the market place by giving them attractive 3D shapes. Whatever ball or fancy shape you want, CARUGIL has a solution for you.



Multicolored lollipops

Produced multicolored lollipops with controlled positioning of the colors.



Striped lollipops

Multicolored striped lollipops with two or three different colors



CARUGIL lollipop lines

Give your lollipops a distinctive tinge

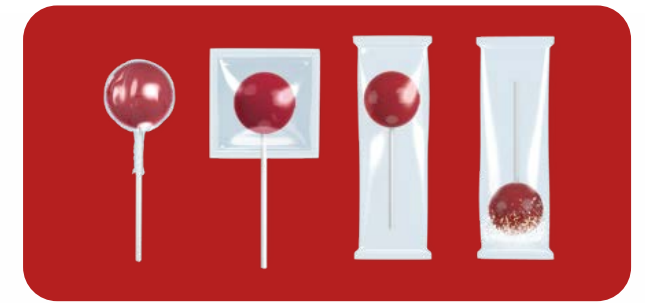
The finishing touch in appearance is carried out by the product finishing equipment such as Sugar Sander. This is where **Carugil can help you to achieve the highest and distinctive tinge in your product appearance and taste with its Sugar Sanders.**



It's all in the packaging

The world of lollipop production has become increasingly competitive, with companies constantly developing new concepts to help place their products above their competitors.

Choosing the right packaging style for the market is a key to succeed. Nowadays, packaging is also increasingly used to encourage consumer interaction and deepen engagement in order to maintain brand loyalty well beyond the point of purchase. Well aware of this fact, Carugil has become the **only company in the World offering the most popular wrapping styles for your lollipops. No matter what style you like the most, we have it!**



● Bunch



● 4-Sides Seal



● Flow-pack



● Stickpack

CARUGIL lollipop lines

Lollipop machinery design has evolved considerably over the last few decades. Driven by ongoing changes in consumer behaviours and preferences, lollipop manufacturers need machines that are able to adapt quickly to industry changes, while delivering the speeds they need to maintain a profitable operation. By partnering with an equipment manufacturer, who is able to deliver **integrated turnkey systems** that are designed with flexibility in mind, lollipop manufacturers are able to ensure they have the technology they need to meet both their current as well as their future needs.

Our production lines

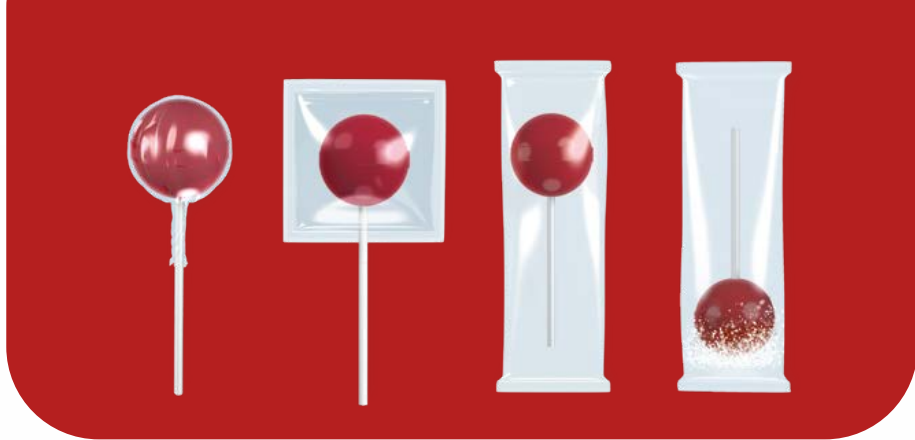
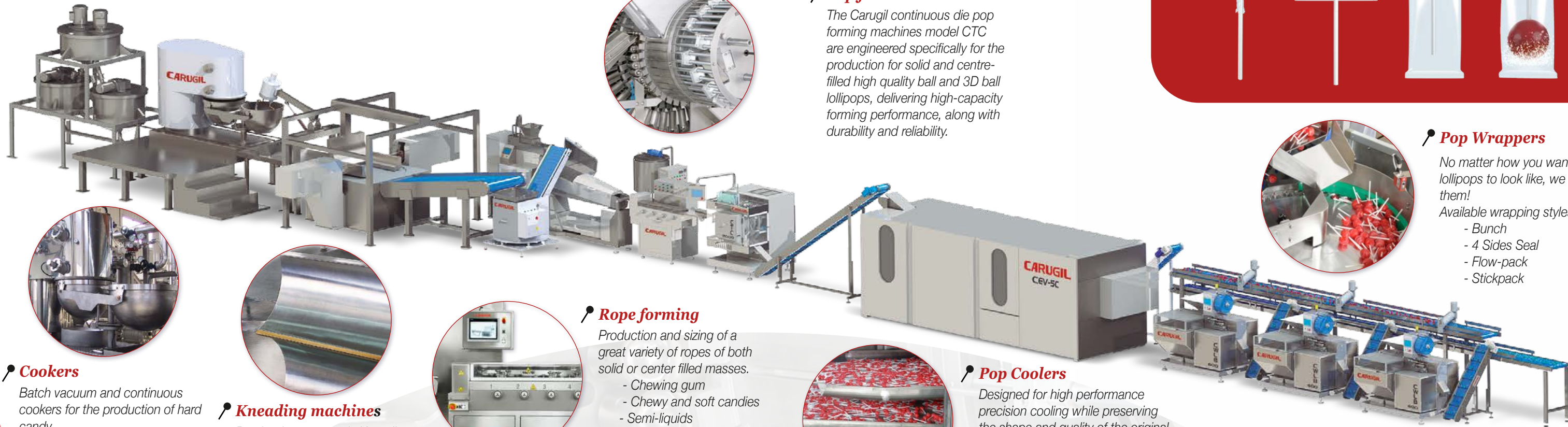
Production line	Wrapping Style	Capacity
Standard capacity line	Bunch, 4-Sides Seal, Flow-pack and Stickpack	Up to 750 Kilos per hour
High capacity line	Bunch, 4-Sides Seal, Flow-pack and Stickpack	Up to 1500 Kilos per hour

As a result of constant research and years of development, CARUGIL offers complete lines with the most modern machinery for the production of lollipops.

With **capacities up to 1500 Kg/h**, our complete lines comprise compact machines whose main characteristics are **reliability and performance**. To develop our own technology for the manufacturing process has been one of the most important keys in our success.



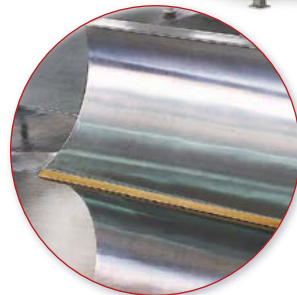
CARUGIL lollipop lines



🔑 Cookers

Batch vacuum and continuous cookers for the production of hard candy.

- Capacities:
- Up to 750 Kg/h
 - Up to 1500 Kg/h



🔑 Kneading machines

Batch-wise, automatic Kneading Machines designed to knead, homogenize and evenly cool down high boiled sugar masses. Up to 70 Kg per batch.



🔑 Rope forming

Production and sizing of a great variety of ropes of both solid or center filled masses.

- Chewing gum
- Chewy and soft candies
- Semi-liquids



🔑 Pop formers

The Carugil continuous die pop forming machines model CTC are engineered specifically for the production for solid and centre-filled high quality ball and 3D ball lollipops, delivering high-capacity forming performance, along with durability and reliability.



🔑 Pop Coolers

Designed for high performance precision cooling while preserving the shape and quality of the original lollipop.

- Capacity:
- Up to 750 Kg/h
 - Up to 1500 Kg/h



🔑 Pop Wrappers

No matter how you want your lollipops to look like, we can wrap them!

Available wrapping styles:

- Bunch
- 4 Sides Seal
- Flow-pack
- Stickpack

CARUGIL Pre-forming line

Production and sizing of a great variety of ropes

The CARUGIL pre-forming line has been conceived to deliver a **continuous and consistent rope, either solid or center-filled**, to the down-stream lollipop Forming Machine.

It is composed by the following machines:

- Extruder model CSTR.
- Filling devices for powder and semi-liquids.
- Batch roller model CBC-120.
- Rope sizer model CRC-4.
- Main control cabinet for all the machines above.



Extruders CSTR

- Up to 450 Kg/h (depending on the model).
- Heavy duty construction. Easy and safe operation.
- All areas in contact with the product made in Stainless Steel.
- Twin-screw infeed section with counter-rotating screws to provide a stable infeed.
- Water jacketed extrusion barrel with electronic temperature control, which allows for an accurate and even temperature of the whole extrusion area.

Batch roller CBC-120

- Max. loading capacity: 120 Kg.
- All parts in contact with the product completely made of stainless steel.
- Four powered conical rollers. Stainless steel made.
- Left-right alternate move of conical rollers.
- Automatic lowering and lifting movement by push button.
- Hand-wheel driving a spacer to choose the final position of the cones according to the final diameter of the sugar rope.
- Electrical heating and temperature adjustment.

Rope sizer CRC-4

- Cluster with 4 pairs of rollers
- 4 pairs of horizontal sizing rollers made of Stainless Steel.
- Electrical heating system by heaters.
- Automatic rope control: speed synchronization with the downstream equipment
- Safety protection placed onto the sizing stage.
- Rope cross-section adjustment by means of gravity indicators located under each pair of sizing rollers.
- Self-lubricated bearings on all moving parts.
- Thermostat for temperature adjustment.

CARUGIL Pop Formers Models CTC



High performance die forming

The Carugil continuous die lollipop forming machines models CTC are engineered specifically for the production of **solid and center-filled high quality ball and 3D lollipops**, delivering high-capacity forming performance, along with durability and reliability. It's precisely these uncompromised qualities that have earned Carugil their reputation for high performance forming and problem-free operation.

The Carugil Pop Formers have been designed to withstand the rigors of high-output confectionery production. Since the Pop Former is at the heart of the lollipop processing line, our models have therefore been engineered with strength and durability as their main assets.

Technical Specifications

	CTC-1000	CTC-2000	CTC-XHS
Output (max.)	980 ppm	1800 ppm	2700 ppm
Diameter of the lollipop	18 - 35 mm	18 - 35 mm	18 - 35 mm
Length of the lollipop (max.)	45 mm	45 mm	45 mm
Diameter of the stick	3,3 - 6,0 mm	3,3 - 6,0 mm	3,3 - 6,0 mm
Power consumption	2,6 kW	2,8 kW	4,5 kW



3D shapes

The CTC pop formers can a wide range of fancy lollipops, either solid or with fillings of gum, chewy candy and powders with positioning of colors.

Easy and fast changover, withing one hour.



Benefits

- Ball and 3D lollipops
- Possibility of producing lollipops with fillings of gum, chewy candy and powders.
- CIP integrated system.
- Automatic greasing system.
- Control of the position of the colors.

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CARUGIL Pop Coolers Models CEV



High precision cooling for your lollipops

The Carugil pop coolers are designed for high-performance precision cooling of a wide range of **ball, 3D ball and cylindrical lollipops, while retaining the original lollipop's shape and quality.** Their extra-large product tiers are designed to keep the lollipops rolling continuously, thus avoiding deformation.

The optimized cooling air flow system allows for a high **capacity of up to 1.500 Kg/h.** It provides an even and gentle cooling and circulates cool air to quickly cool large quantities of die-formed, filled and solid lollipops, from forming temperature down to packaging temperature.

Highlights

- Cooling capacity, up to 1.500 Kg/h.
- Suitable for ball, 3D ball and cylindrical lollipops.
- High quality lollipops. Original shape of the lollipops is retained during the cooling process.
- Total capacity can be easily extended (depending on the model).
- Higienic design.
- Remote troubleshooting (depending on the model).



High precision cooling for your lollipops

Because not every producer has the same needs, our equipment can be configured with different options to meet the required capacity. Besides, our cooling tunnels can be easily upgraded to high capacity to give a cost-effective solution to your increasing production needs.

Ambient or closed version, entry level or High Capacity configuration, gas cooling or chilling water system, inverter or on/off technology. Just select the configuration that meets your needs best.

Technical Specifications

	CEV-3 (Upgradable)	CEV-5	CEV-5C
Output (max.)	1000 Kg/h	1200 Kg/h	1.500 Kg/h
Number of trays	3	5	5
Dimesions (WxDxH) (mm)	3930 x 2380 x 2230	3930 x 2380 x 2230	5800 x 2380 x 2230
Cooling system	Ambient air	Ambient air	up to 45 kW
Power consumption	2,6 kW	2,8 kW	3,5 kW

CARUGIL Sugar sander Models BAC



Add extra appeal to your lollipops

You may be satisfied with your existing equipment for lollipop which produces your product to your standard quality. However, this will not make your product stand out in the marketplace.

The finishing touch in appearance is carried out by the product finishing equipment such as Sugar Sander. This is where **Carugil can help you to achieve the highest and distinctive tinge in your product appearance and taste with its Sugar Sanders.**



Give your lollipops a distinctive tinge



Different covers

- Chilly powder
- Sugar / citric acid
- Vemicelly
- Chia and other seeds
- Sugar grains



CARUGIL Bunch Wrappers

Models CWLB

The best choice in its class for quality bunch wrapping

Reliability, flexibility, high performance, efficiency..., these are characteristics that any lollipop producer hopes a Bunch Wrapper can offer. The Carugil Bunch Wrappers not only achieve these goals, but look into the future providing **extra features to bolster your lollipops with added value that makes them stand out in the market place.**

Due to its compact and innovative design, the Carugil Bunch Wrappers make professional, efficient and precise single twist wrapping accessible to the entry level producers. For medium and large producers, the CWLB-800 model offers high-tech components and strong performance combined with state-of-the-art control technology at high speed.

Technical Specifications

	CWLB-400	CWLB-600	CWLB-800
Output (lollipops/min)	400	600	800
Lollipop diameter	18 - 35 mm	18 - 35 mm	18 - 35 mm
Stick diameter	3,2 - 6,0 mm	3,2 - 6,0 mm	3,2 - 6,0 mm
Power consumption	5,0 kW	9,0 kW	14,0 kW

Highlights

- Up to **400, 600 and 800 pieces per minute**. Just choose the model that matches your necessities the best.
- High-quality wrapping of ball and 3D ball lollipops.
- The servo-driven feeding system allows wrapping of different sizes of lollipops within a wide range with the same feeding dial plate.
- Available labeling solutions for “flag on stick” and stickers or tattoos on the wrapping film.
- Hygienic and compact design.

Labelling Solutions

Our labelling solutions can be quickly and easily attached to our Bunch Wrappers. The label applicators accurately, efficiently and reliably **apply self-adhesive stickers or tattoos to the continuous wrapping film as well as self-adhesive flag stickers around the lollipop’s stick.**

Servo matching speed control allows the speed of the labellers to precisely match the speed of the Bunch Wrapper even if the speed varies or there is any missing lollipop on the transport chain.

Extra features



High flexibility continuous printer to print best before dates, expiry, batch number or other alphanumeric text.



PLC controlled device for counting & filling lollipops into containers.



CARUGIL 4-Sides seal wrappers

Models CWS

Your lollipops packed in 4-Sides Seal style

The Carugil CWLS-600 Wrapper for lollipop makes professional, efficient and precise wrapping in **4-Side Seal style** accessible to the entry level producers. For medium and large producers, the CWLS-800 model offers high-tech components and strong performance combined with state-of-the-art control technology at high speed.

Highlights

- The wrapper is not mechanically linked to the cooling tunnel, therefore the wrapper can work independently from the equipment upstream.
- Perfect shaped lollipop. The lollipops are transferred to the wrapper after being cooled down in the cooling tunnel.
- Ball and 3D lollipops can be wrapped on the CWL-4S wrappers.

Technical Specifications

	CWLS-600
Output (lollipops/min)	600
Lollipop diameter	18 - 35 mm
Stick diameter	3,2 - 6,0 mm
Power consumption	8,5 kW

CARUGIL Flow-wrappers Models CWFL

Reliable and accurate Flow-wrapping

Reliable and accurate flow-wrapping at High Speed up to 600 pieces per minute. The Carugil CWFL-1000 is a continuous-motion horizontal form, fill and seal (HFFS) machine for the **flow-wrapping of ball and 3D lollipops at speeds up to 600 pieces per minute.**

The machine is designed to have minimal maintenance requirements. Besides, a new design transport system is utilized, replacing the traditional chain feeding systems, therefore avoiding the need for greasing the chain and contaminating the product.

All the movements of the machine are driven by brushless servomotors and monitored by the latest generation electronic controls that guarantee the optimum synchronization of the wrapping material at high speed.

Technical Specifications

	CWFL-1000
Output	Max 500 lollipops per minute
Lollipop diameter	15 - 30 mm
Length of the lollipop	70-150 mm
Power consumption	8,5 kW



CARUGIL Stickpack multilane

wrappers Models CWLS

The best choice to stand out in the market place

Wrap your lollipops in a nice stickpack style while saving wrapping material compared to the traditional flow-pack style. Furthermore, **give your product a distinctive tinge and let the children get fun by dipping the lollipop into fizzy powder or pop rocks.**

With a simple and compact design, the CWSL series offers a free access without tools to main components, allows a fast and easy changeover and it is built up with high resistance and long durability components. All this helps to reduce downtimes and drives to an OEE over 95%.



Highlights

- 4 - 10 lanes.
- High output, up to 480 lollipops per minute.
- 100% efficiency. NO Product - NO Pouch (servo-motor)
- Quick format change with few tools.
- The sachet can contain powder/granulates for dipping the lollipop.
- Systems for transfer to secondary packaging equipment.



Volumetric filler to dose powder/granulates inside the sachet.

A special dosing volumetric filler can be optionally fitted in the machine to allow dosing powder or granulates into the sachet for dipping the lollipops. This system has no friction and keeps the product properties intact.



Strings with tear pattern.

By adding a second piston for the horizontal cut, this solution allows to produce strings with perforations between each stick/sachet to ease its separation. Units per string are set through the digital counter of the HMI.

Notch device.

An optional module will hole punch at the end of the sachet, thus allowing the string to be hung on displays.



CUSTOMER SUPPORT

Customer satisfaction is
the central focus for us

When time makes the difference

When time is of essence. There is not much to act when there is a failure that forces production to stop. We provide remote diagnostic and on-call repairs to address any technical incident as quickly as possible.

Remote troubleshooting and on-call repairs

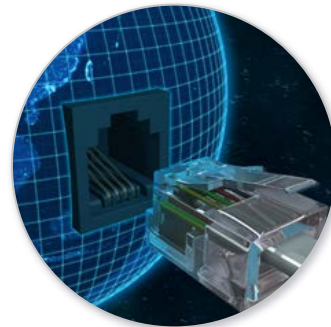
- **Remote Diagnosis Service**

RDS enables condition monitoring. The installation of RDS also enables condition monitoring and condition-based maintenance, which detects potential issues before they escalate, compromise performance or cause system failure.

Benefits. Through Remote Diagnostic Services (RDS) and Global Technical Support, Carugil reduces the repair time, improving the availability and safety of operations. The system reduces the need for on-site visits by providing assistance from a global technical center.

- **On call repair**

In any place you need it. In the case of more complex trouble-shooting situations, we are able to dispatch a service engineer anywhere in the world.



Parts and maintenance

Our service increases the service life and minimises failure of your machines, and improves the quality of your products. To guarantee this, the highest quality parts are available. Carugil can advise you on this based on your daily needs. Timely preventive maintenance by Carugil's specialists guarantees the highest possible usability of your machines and reduces the risk of unforeseen situations.

To minimise time lost by failure, our field service engineers, equipped with up-to-date technical information, are capable of solving any problem.



Sales Network

Within the Carugil sales network, the presence of local agents and sales partners plays an extremely important role. In such a complex and segmented markets as the Confectionery and Food sectors, their work is indispensable to guarantee in-depth knowledge of local markets, complete coverage of the territory and a high level of service, with the ability to provide a rapid response to the various needs of customers.

Local agents and sales partners are therefore an important asset for the group, a human and professional capital of which Carugil is proud and which has accompanied the history of the companies, sharing their successes and challenges down the years through a relationship of consolidated partnership.



CARUGIL



carugil.com

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