



HANDLING YOUR NEEDS

SINCE 1986

**MACHINERY
FOR THE
BLOW
MOLDING
INDUSTRY**



HANDLING YOUR NEEDS

SINCE 1986



AD & OR



 **AND & OR**



INDEX

- 06** | Company profile and services
- 10** | Solutions for the blow molding industry
- 11** | FACTORY concept - optimize your plastic containers production
- 12** | Take out systems
- 14** | Bottle handling and conveying
- 16** | Quality control
- 19** | Finishing and assembly
- 20** | Handle applicator machines
- 22** | Bagging machines
- 24** | Tray and box packing
- 25** | Palletizing - end of the line
- 28** | Robot solutions
- 29** | Automated guided vehicles
- 30** | Engineering and turn-key projects



AND & OR[®]

HANDLING YOUR NEEDS

SINCE 1986





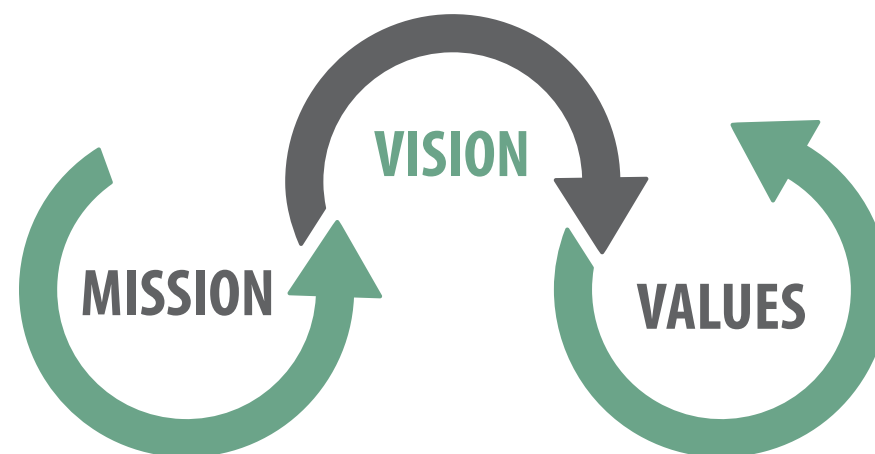
COMPANY

Since 1986, AND&OR has been designing, developing and making machines and custom-made complete solutions for the blow molding, bottling and packaging industries.

Continuous efforts, commitment to quality and creativity have been the driving force of our increasing competitiveness in the market, being today an international reference in the sector.

We assemble and test our machines in an automated, modern 11,500 square meters facility headquartered in Seville, Spain.

We strongly believe in a close collaboration with our customers during all phases of a project: design/engineering, manufacturing, start-up installation and after-sales service.



MISSION

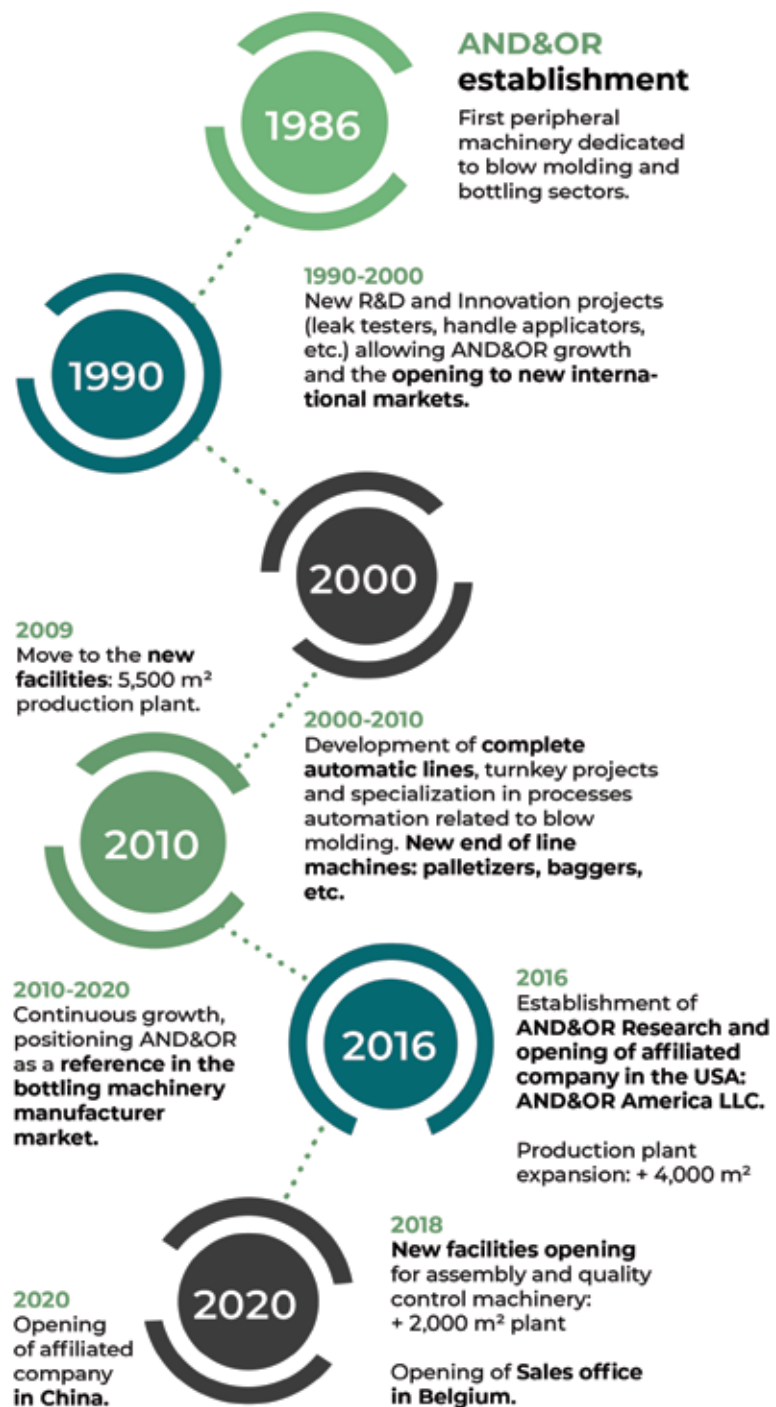
We provide to our customers technological solutions most adapted to their needs in bottles handling.

VISION

To be a worldwide machinery manufacturer reference in bottle handling.

VALUES

- Humility and respect
- Team work and spirit
- Commitment and involvement
- Discipline and seriousness
- Passion for what we do



AND&OR TODAY



Experience working for the blow molding industry since **1986**



More than **2,000** machines installed worldwide, of our design and manufacturing



Customers and after sales service in more than **90** countries



Exports represent more than **85%** of **AND&OR's** turnover



4 branches worldwide



150 employees



More than **80** specialized technicians



11,500 m² of assembly plant

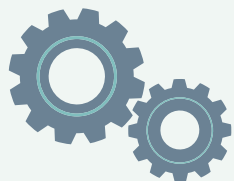
SERVICES



AND/OR's after-sales and customer service includes management personnel and qualified technicians to respond to any need a customer may have: installation of new equipment, inspection and upgrading of existing equipment, preventive maintenance, technical information and brochures, adjustments, repairs, remote monitoring of the equipment's performance (via internet), etc.

“It is our mission to become your technological partner, create dedicated customized solutions and work to improve your profitability”

Operate the AND/OR machines at their maximum efficiency over their lifetime. To that end, the Plan 95% offers several accompanying and participation levels:



RECOMMENDED SPARE PARTS

Original recommended spare parts necessary for 2,000, 4,000 and 8,000 h.



ANNUAL MAINTENANCE

Dedicated and specific preventive maintenance plans.



ONSITE TECHNICAL ASSISTANCE

To attend customers at their facilities when so required: starting up new equipment or upgrading existing one.



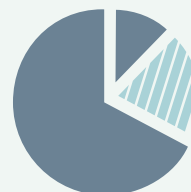
ONLINE TECHNICAL ASSISTANCE

Through remote connection with the customer service team at AND/OR facilities.



TRAINING SERVICES

Training programs for your technicians and line workers, at AND/OR or at your facilities.



MACHINERY UP-GRADE

Up-Grades of your machinery with the newest versions.



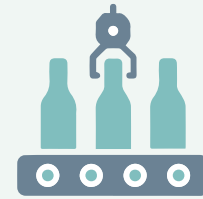
MACHINE MONITORING

Get a weekly report for your machines' operational efficiency.



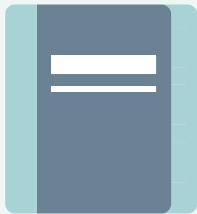
STUDY/IMPROVEMENT OF PROCESSES

Studies and advice on how to improve your processes.



PARTIAL PRODUCTION MANAGEMENT/CONTROL

With AND/OR qualified personnel to operate your machines.



PROJECTS MANAGEMENT

- Contact from the beginning with the assigned Project Manager.
- Follow-up, expansions, changes: risks reduction.
- Costs control.
- Deadline execution follow-up.
- Tracking during setup and start-up.



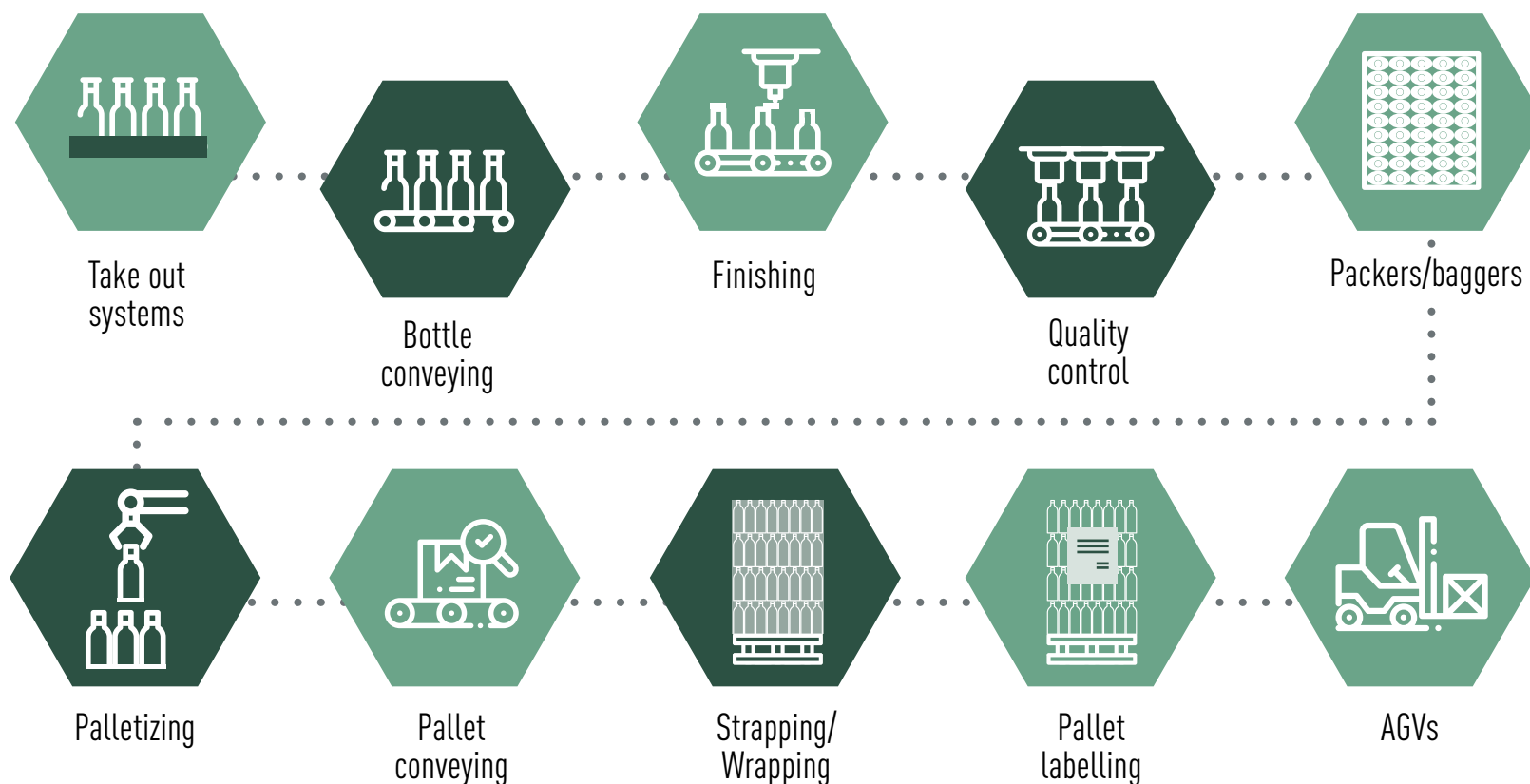
Solutions for the blow molding industry

AND&OR has always been inspired by the blow molding industry real problems. Working with our customers, in a close collaboration, has been the start point of all machines designs and developments. To offer simple and effective solutions, adding value to our customers' production process, is the approach and goal of all our engineers. AND&OR approaches different customers, from big groups and multi-national companies to local container's manufacturers.

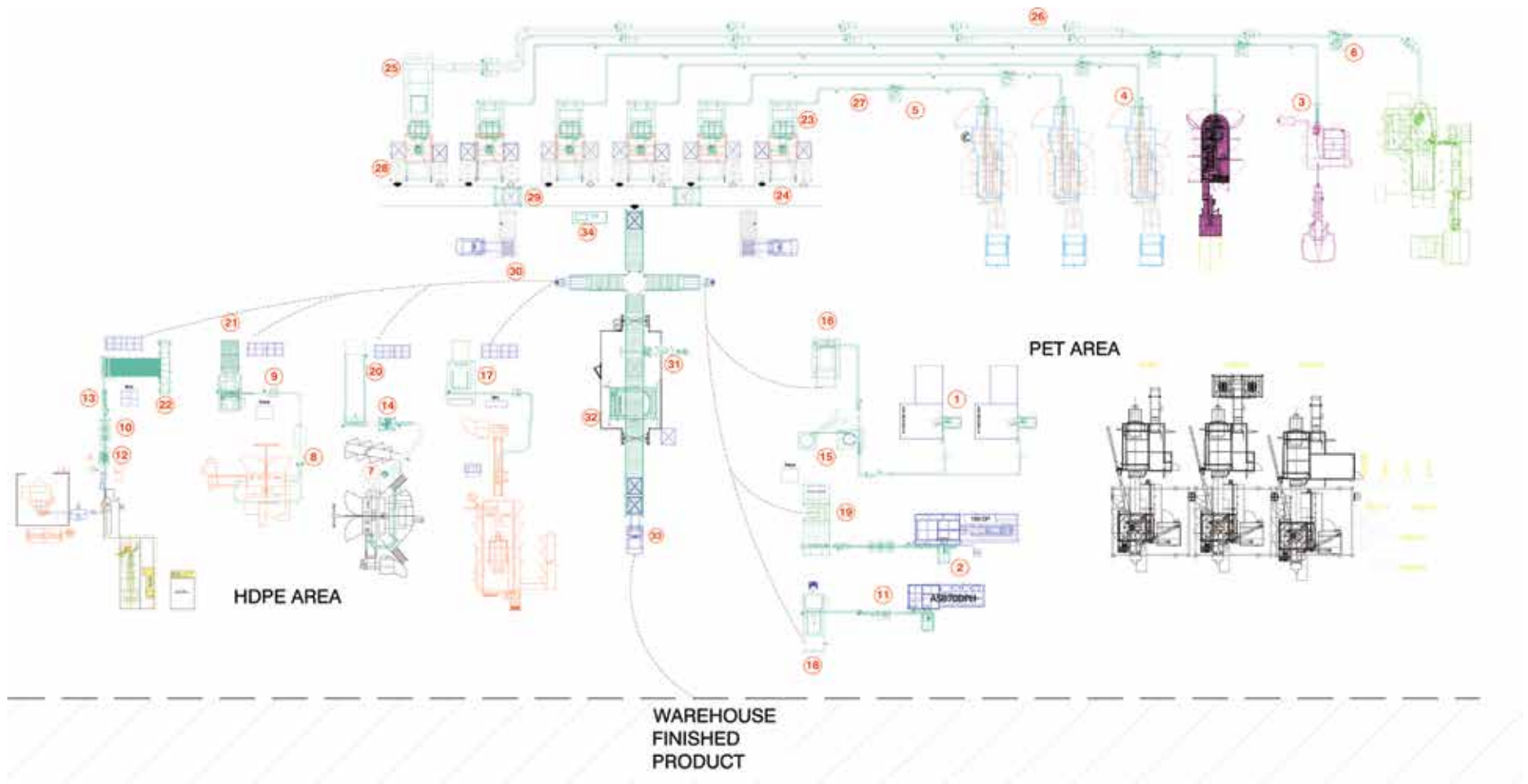
We offer complete automation projects, from the blower to the wa-

rehouse, as well as individual machines, including: take out systems, conveying systems, bottle handling systems, quality control (leak testers, camera vision, weight testers), trimming machines, milling machines, handle applicator machines, packers, baggers, palletizers, wrapping machines, strapping machines, pallet conveyors and AGV (Automatic Guided Vehicles).

We offer flexible and compact solutions, from semi-automatic to fully automatic systems, always adapting to our customers' specific needs.



FACTORY concept – optimize your plastic containers production



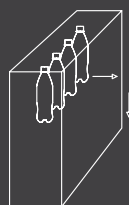
- 1. TAKE OUT ROBOT-AOKI
- 2. TAKE OUT ROBOT-NISSEI
- 3. TAC – TAKE OUT SYSTEM
- 4. REC – TAKE OUT SYSTEM
- 5. ROTARY LEAK TESTER - 8 HEADSTOCKS
- 6. ROTARY LEAK TESTER – 16 HEADSTOCKS
- 7. TURNING SYSTEM 180°
- 8. BOTTLE UNIFIER 2-1 VIAS
- 9. FIX HEAD LEAK TESTER
- 10. 2 MOBILE HEADS LEAK TESTER
- 11. 4 FIX HEADS LEAK TESTER
- 12. LINEAR TRIMMER

- 13. METAL DETECTOR
- 14. FACE MILLING & LEAK TESTER
- 15. HANDLE APPLICATOR
- 16. SEMI AUTOMATIC BAGGER
- 17. AUTOMATIC BAGGER MOD. BMS
- 18. PALLETIZER MOD. ETP
- 19. PALLETIZER MOD. ECA-E
- 20. COLLATION TABLE
- 21. TRAY PACKER MOD. ET
- 22. COOLING TABLE & TUMBLE BOX PACKER
- 23. FLEX. PALLETIZER MOD. EMAM+RPZ
- 24. TRAY WAREHOUSE

- 25. FLEX PALLETIZER MOD. BCM+RPZ – HIGH SPEED BAG/TRAY
- 26. AIR BOTTLES CONVEYOR
- 27. BELT BOTTLES CONVEYOR
- 28. ROLLER PALLET CONVEYOR
- 29. AUTOMATIC MOBILE CART
- 30. PALLET DOSIFIER
- 31. STRAPPING MACHINE
- 32. WRAPPING MACHINE
- 33. FORK LIFT VEHICLE AGV
- 34. MAIN CONTROL PANEL
-
-

TAKE OUT SYSTEMS

AND&OR has an endless range of possibilities for the extraction and/or reception of containers from the blower, regardless of the blowing machine used (PET or HDPE).



BLOWER OUTPUT

One step blow molding.
Nissei ASB

SERIE

REZ

SYSTEM

Take out robot (external or integrated)

(12M, 12N, 50MB, 70DPH, 150DP, etc.)

REZ + LS

Take out robot with leak tester integrated – Compact and cost effective solution.

BLOWER OUTPUT

One step blow molding.
Nissei ASB

SERIE

REZ-G

SYSTEM

Take out robot (external or integrated)

(250, 350 and 500)

REZ-G + LS

Take out robot with leak tester integrated – Compact and cost effective solution.



BLOWER OUTPUT

Linear or rotary blowers, bottle's output by neck guides

SERIE

TAC

SYSTEM

Motorized neck conveyor, easy change over for multi format lines with limited space for bottle conveyors.

BLOWER OUTPUT

Linear blowers, bottle's output by flipping grippers

SERIE

REC

SYSTEM

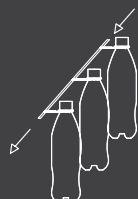
Vacuum conveyor with height regulation through wheel (in multi format lines, enough meters of conveyor are needed downstream to regulate line's height).

REC+TAC

Vacuum conveyor + motorized neck conveyor (Multi-format lines with limited space for bottle conveyors.)

REC+MASK

Vacuum conveyor and reception mask.



BLOWER OUTPUT

Linear blowers, bottle's output by linear grippers

SERIE

REC

SYSTEM

Vacuum conveyor with height regulation through wheel (in multi format lines, enough meters of conveyor are needed downstream to regulate line's height).

REC+TAC

Vacuum conveyor + motorized neck conveyor (Multi-format lines with limited space for bottle conveyors.)



REZ-CC



REZ integrated



REZ+LS



REC



BOTTLE HANDLING AND CONVEYING

AND/OR manufactures all sorts of conveyors, including its belts or chains, conveyors beams, low friction guides and vacuum systems when required. The models manufactured are mainly:

BELT CONVEYORS

Straight conveyors, with possibility to add a suction element for a better bottle stability and for high speed lines.

CHAIN CONVEYORS WITH STAINLESS STEEL CHASSIS

Built in stainless steel, they include a flexing chain so that curves can be used in a single motorized section.

MODULAR CHAIN CONVEYOR WITH ALUMINIUM CHASSIS

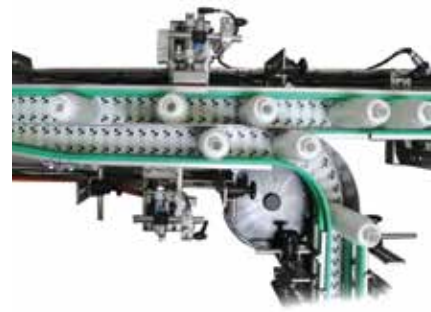
Plastic chain conveyor with an aluminium chassis. Sharp curves can be made in small spaces. The greatest advantage of this type of conveyor is that it is maintenance-free.

AIR CONVEYORS

Pneumatic conveyors built in stainless steel. Guides regulation can be manual or automatic. They are recommended when working at high production rates with light, petaloids and/or unstable bottles.

ELEVATOR CONVEYORS

Bottles elevation and descent conveyors, with flexible chain. Allows a better access in plant taking the transport at height. Elevation up to 7 m height.



MODULAR CONVEYOR



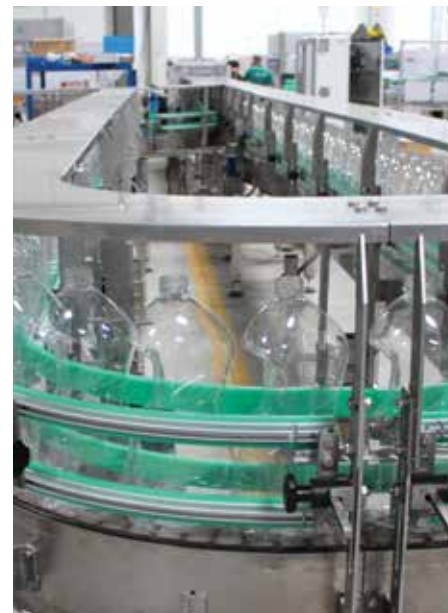
ELEVATOR



X TRANSFER



SUCTION BELT



STAINLESS STEEL CHASSIS



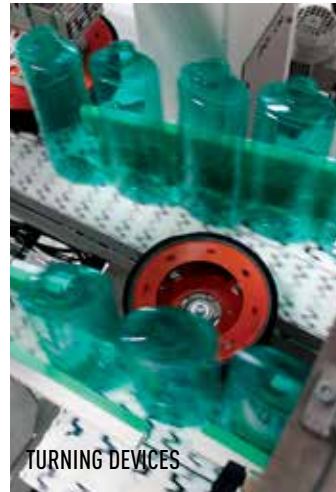
AIR CONVEYOR



AUTO. REGUL. GUIDES

AUTOMATIC REGULATION GUIDES

Allowing fast and accurate format changeover in a totally automatic way.



TURNING DEVICES

TURNING DEVICES

For the turning and positioning of the containers, AND/OR offers diverse systems depending on bottles' shape, line speed, turning degree (45°, 90°, 180°, etc.). Our models can be pneumatic, motorized and servo-motorized.



DIVIDING SYSTEM

UNIFYING AND DIVIDING SYSTEMS

Allowing to go from multi-lane to single lane conveyor and vice versa.

PALLET CONVEYORS

AND/OR pallet handling systems guarantee the production flow and manage efficiently the transport through all the facilities, following the real need of each client.

ACCUMULATION TABLES

AND/OR's accumulation systems guarantee the uninterrupted running of the bottle line in reduced space in order to maximize production efficiency.

ACCUMULATION TABLES ADVANTAGES

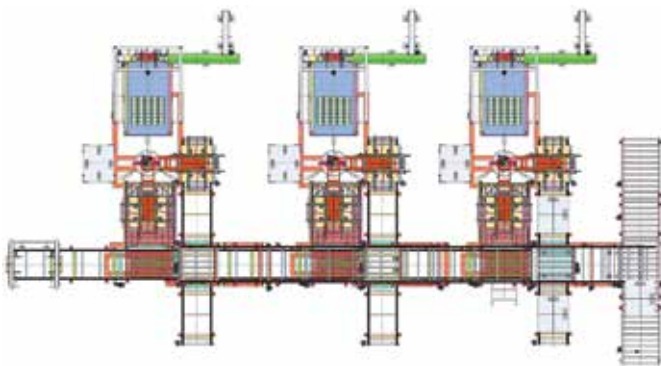
Compactness: saves space in comparison to traditional accumulation systems.

Better surface/time accumulation

Simple maintenance

No risk of bottleneck formation

For 2 steps PET blow molding, it accumulates bottles coming from pre-forms' oven in case of line stoppage, avoiding the manual replacement of bottles into the conveyors during line start up.



PALLET CONVEYOR



ACCUMULATION TABLES



“The system 100% reliable patented by AND/OR avoids the manual calibration, being the leak tester automatically adjusted to the external conditions, such as temperature, pressure, etc.”

LS8E

QUALITY CONTROL

Leak tightness control is one of our specialties; we have models that process from **1,000 up to 48,000 bph controlling containers from 150 ml to 20 l**. The great versatility of the equipment and the automatic calibration has made **AND/OR** system a market reference.

LS SERIE

They are arranged in line over container's conveyor. They can be fitted with one or more heads, fixed or mobile, depending on the production required and bottles' size. Optionally weight control or camera vision systems are integrated in the leak tester machine.



LS2-C1C2



LS6E

Up to... bph	1000	2000	3000	4000	6000
Linear leak tester without structure	LS1K			LS5K	LS8K
Linear leak tester with fix heads	LS1E	LS2E	LS4E	LS6E	LS8E
Linear leak tester with mobile heads		LS1-C1		LS2-C1C2	

**Production reference for 1l bottle – To check other volumes, please contact AND/OR.*



LWS

LWS Weight control + Leak tester

LSE-V Weight control + Leak tester

LSR SERIE

Due to its simple, strong and high electronic technology design, it is very trustworthy, sensitive and precise so that it allows productions rate up to 48,000 bph.

The quality of the final product improves and the return and damage are reduced to a minimum.

These systems can be equipped with extra features:

- Camera vision systems
- Simulation of leak for an automatic machine's self-checking.
- Statistics download in USB memory.

Up to... bph	8000	12000	16000	24000	32000	48000
Rotary leak tester	LS8R	LS12R	LS16R	LS24R	LS32R	LS48R

**Production reference for 1 L bottle – To check other volumes, please contact AND&OR.*

“At high speeds only a rotary leak tester guarantees sensibilities of 0.1 mm pore diameter”



LS16R



LS48R



ARTIFICIAL VISION

QUALITY CONTROL

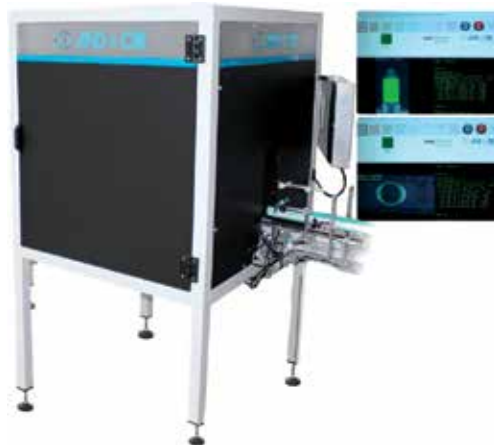
VA SERIE

360° artificial vision system guarantee plastic bottles, taps and handles defects detection:

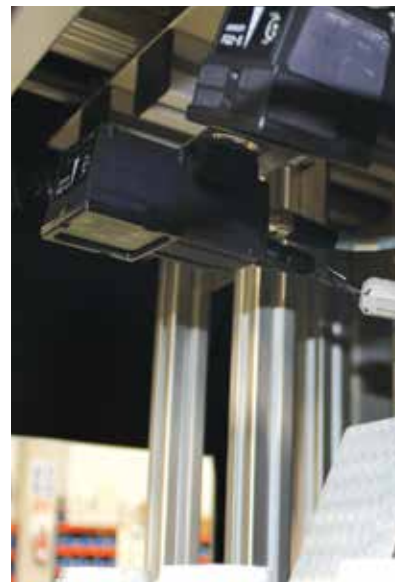
The strictly studied optical design guarantees an optimum image quality with high quality and strength components, in an industrial environment condition, high speeds, and variable lighting and temperature conditions.

- Flexible application
- Easy configuration
- Up to 6 inspection tools
- Different defects types.
- Inspection of various specific areas of bottles.

**“Friendly configuration for format changeover:
new dimensions and colors.”**



VA SERIE



DETECTED DEFECTS



CIRCULARITY



BLACK DOTS



BREAKS



NECK FLASH



INSIDE FLASH



LACK OF MATERIAL



VERTICAL FLASH



HORIZONTAL FLASH



BLACK DOTS



OVALIZATION

* Specifications subject to viability study made on real samples executed by AND&OR.

FINISHING AND ASSEMBLY

CC SERIE

Linear and rotary trimmers, AND&OR offers different models that adapt to line speed, bottles' shape and material. Optionally a leak tester can be integrated in the same equipment.

CCL	Linear trimmer	CCR	Rotary trimmer
-----	----------------	-----	----------------



CCL



CCR



FH

FH SERIE

It performs the milling (eliminating the polyamide) and leak testing on HDPE bottles neck surface. It achieves a perfect finishing thanks to its servo driven, smooth milling system, reaching a high precision.

RIO SERIE

It performs the automatic insertion of foil into caps. There are rotary and linear models. It includes a glue injection system that places glue into the cap, previously to the foil insertion.



RIO

HANDLE APPLICATOR MACHINES

AND&OR is nowadays the world leader in the manufacture and marketing of plastic handle application machines for PET and PE bottles. Through its long experience and the widest range in the market, AND&OR provides solutions to insert neck handles, lateral handles and umbrella handles, for all its clients' production needs.

NECK HANDLE APPLICATORS

Up to...bph	1200	2400	4000	6000
Empty bottle	SIA 1000	SIA 2000	SIA 3000	SIA 5000
Up to...bph	10000	12000	16000	24000
Empty bottle	SIA 8000	SIA 12000	SIA 16000	SIA 24000

LATERAL HANDLE APPLICATORS

Up to...bph	1200	2400	4000	8000	12000	15000
Empty bottle	SIAL 1000	SIAL 3000	SIAL 6000	SIAL 8000	SIAL 12000	SIAL 15000

**Handle design affects directly to machine's capacity. Please contact AND&OR for more info.*



SIAL 12500



SIA 2000



SIAL 6000

UMBRELLA HANDLE APPLICATORS

Up to...bph	1000	2000	4000	8000	12000	24000
Empty bottle	SIAP1000	SIAP 2000	SIAP 4000	SIAP 8000	SIAP 12000	SIAP 24000



ASAFLAT SERIES

Our handle applicator system on buckets performs the insertion of handles on PET or PE buckets. It is a fully automatic system that allows tumble or pre oriented handles feeding.



SIAP 8000



ASAFLAT

BAGGING MACHINES

Bagging is becoming today the most popular bottle packing all around the world. There are several reasons for opting for this kind of packaging.



BMH12-A1000

“MINI BAGGER: minimize space, maximize results”



MINI BAGGER

ADVANTAGES

- An important cost saving towards the traditional tray packing.
- Often, more bottles can fit in one layer, increasing the number of bottles packaged in a pallet.
- The improved hygiene in products, being the bottles protected from human manipulation or cardboard contamination. Especially important in some sectors such as pharmaceutical, cosmetic or food.

AND&OR counts with a wide range of bagging machine models, to adapt to all specific needs, bags sizes, line speeds and bottles' shape.

Machine type	Model	Bags adjustable in width and length – Bag's size in mm
SEMI AUTOMATIC Preformed bag	ECA-BT	All bags sizes. Customized mask per bottle/bag format.
.....		
AUTOMATIC Roll of film		
COMPACT SERIE: BMS From 400 to 2,000 bph	BMS 08–A600 – Mini bagger (pharmacy, food, cosmetic)	500x600, 800x600, 400x600, 400x400
	BMS06 –A1000	1000x600, 800x600, 800x400, 1000x400
	BMS12-A1000	1200x1000, 1200x800, 600x1000, 600x800
.....		
FLEXIBLE SERIES: BM From 2,000 to 6,000 bph	BM 10-A600	600x500, 800x600, 400x600, 400x400, 600x1000
	BM06-A1000	1000x600, 800x600, 800x400, 1000x400
	BM12-A1000	1200x1000, 1200x800, 600x1000, 600x800
.....		

Machine type	Model	Bags adjustable in width and length – Bag's size in mm
HIGH SPEED PRODUCTION From 6,000 to 14,000 bph	BMH12 – A1000. Double lane infeed	1200x1000, 1200x800, 600x1000, 600x800
	BMA12-A1000. Air conveyor infeed	1200x1000, 1200x800, 600x1000, 600x800
HIGH SPEED PRODUCTION From 15,000 to 55,000 bph	BMH12 – A1000. Double lane infeed	1200x1000, 1200x800, 600x1000, 600x800
	BM4H12 – A1000. Multi lane infeed	1200x1000, 1200x800, 600x1000, 600x800
Auto adjustable bagging machine	BM12-A1000-AR	Automatically adjusts being able to work with several production lines simultaneously

* For others bag sizes, please contact AND&OR.



THE ADVANTAGES OF SHRINKING PISTOLS TOWARDS TRADITIONAL OVEN

- Energy consumption is decreased.
- It is a more compact solution, as pistols are integrated inside the machine, not taking any extra space.
- It has an easier maintenance.
- It is a more economical solution.
- It provides better results!

AUTOMATIC SYSTEM VS. SEMI AUTOMATIC SYSTEM

AUTOMATIC – ROLL OF FILM

Same roll of film for any bag and bottle size used in the machine.

Changeover is fast and do not require changing parts. High autonomy. Give more space for bags accumulation at the output of the machine to gain in autonomy.

SEMI AUTOMATIC – BAG PRE-FORMED

Every change-over requires a different size/model of preformed bag.

Changeover requires parts changing.

One bag autonomy, as the operator needs to replace the empty bag every time the previous one has been filled and closed.

AND&OR DE-BAGGING MACHINE (offered to the bottling industry), able to automatically de-pack and position bottles standing into the bottling line, is the perfect partner to complete the full process without risk of contamination.



DBM

TRAY AND BOX PACKING

AND&OR tray packers place plastic containers into cardboard trays. These machines have been designed to cope with different bottle shapes and line requirements: trays type, available space and automation needed. These are economic units that help our customers to minimize labor cost, keeping a

SERIE	TRAY TYPE	OPERATION
ETS	Preformed upside trays	Three positions packer: <ol style="list-style-type: none"> 1. Inlet area, empty tray 2. Bottle's insertion into tray line by line 3. Output area, filled tray
ET	Preformed upside trays	Three positions packer <ol style="list-style-type: none"> 1. Tray warehouse (10 units) 2. Bottle's insertion into tray line by line 3. Output area, filled tray
ECA	Folded trays or with one side opened	Layer formation in buffer space Insertion of whole layer into the tray, holding the layer of bottles by its four sides. Optionally, bagging system can be integrated.

BOX PACKING, "PICK&PLACE" SYSTEM

EPA SERIE	
Automatic Pick&Place packer:	Advantages:
<ul style="list-style-type: none"> • It includes an arranging table to prepare the bottle layer previous bottle insertion into box. • The picking headstock is designed according to bottle formats, being able to pack bottles with no neck ring, either heavy bottles or empty light ones. 	<ul style="list-style-type: none"> • The machine can pack several levels of bottles in the same box • Machine is flexible to work also with cardboard trays in case of need • Easy change over to adapt to several formats and different layers configuration. Servo-motorized movements. • Layer indexation for round formats

high flexibility. Combined with AND&OR take out systems with leak tester integrated, it results into a cost effective solution for low speed lines with limited space areas.



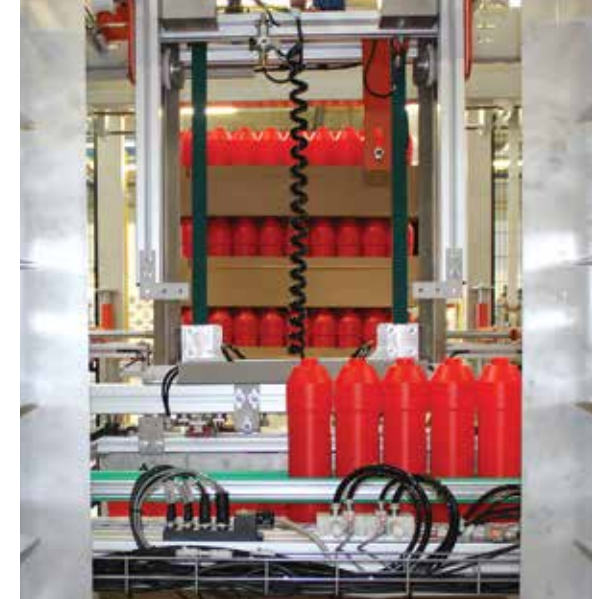
RELATED SYSTEMS

EMA	Collation table for upside trays. (Economic).
MA40	Box packing of tumble bottles.
PFC	Automatic tray former, applying hot glue.

PALLETIZERS – END OF THE LINE

AND&OR has a wide range of solutions for the empty bottles palletization. Bottle shape, line speed, packaging type, automation needed and space available are always important features to take into account before suggesting one system or another.

COMPACT PALLETIZING



ECAM-E-PFC



ETP

SERIE	PACKAGING TYPE	PALLET HEIGHT	DESCRIPTION
ECAM-E	Upside trays, inverted trays, flat sheets.	Up to 1.5m height (to be confirmed after existing conveyor's height).	<p>-Semi-automatic palletizer with arranging table, insertion of complete layer of bottles into tray, using a four side frame to hold bottles and avoid disarrangement.</p> <p>-Motorized platform for pallet lifting.</p> <p>-Trays feeding to be done manually.</p> <p>Optional:</p> <ul style="list-style-type: none"> - Automatic tray feeding. - Automatic tray forming.
ETP-E	Upside trays	Up to 3m height	<p>Automatic three positions palletizer:</p> <ol style="list-style-type: none"> 1. Empty trays warehouse, input area (10 units). 2. Bottle's insertion into tray line by line 3. Palletizing area. <p>Optional:</p> <ul style="list-style-type: none"> - Automatic system that supplies a cover of film over bottles layer from a roll of film. It protects bottles from cardboard contamination. - Automatic position of inverted tray over the highest level

FLEXIBLE PALLETIZING

Arranging table/packer/bagger + Palletizer robot up to 3m height.



PACKING MACHINE	PALLETIZER	PACKAGING TYPE	PACKAGING TYPE
EMAM Layer making machine with motorized belt	RPZ (EMAM+RPZ) Palletizing robot-rotary column. Customized gripper with frame that can collect bottle layer, flat sheets, trays, top covers or pallets.	Upside tray, inverted tray, cardboard sheet, top cover. Cylindrical and square bottles.	<ul style="list-style-type: none"> · Trays, top cover and flat sheets warehouse. · Automatic tray forming unit. · Automatic dispenser of layer of film between levels, over bottle's neck (roll of film supply). · Pallets warehouse, feeding unit. · Motorized chain or roller pallet conveyor.
ECAM / ECA Packaging table that carries out the arrangement and automatic insertion of bottles over flat sheets or into carton trays.	RPZ (ECAM/ECA+RPZ) Palletizing robot-rotary column. Customized gripper with frame that can collect flat sheets, trays, top covers or pallets.	Upside tray, inverted tray, cardboard sheet, top cover. Oval bottles.	<ul style="list-style-type: none"> · Automatic wrapping unit. · Automatic strapping unit. · Mobile cart attending different blow molding lines from palletizers up to wrapping/strapping line or warehouse

“Flexible or compact, automatic or semi-automatic, for low or high speed lines, to be packed in bags and (or cardboard trays, PET or HDPE bottles, any shape and size... AND&OR handles it!”



EMAM+CPZ



EMAM+RPZ



ECAM+RPZ



PACKING MACHINE	PALLETIZER	PACKAGING TYPE	PACKAGING TYPE
EMA Layer making machine over metallic table.	RPZ (EMA+RPZ) Palletizing robot-rotary column. Customized gripper with frame that can collect bottles layer, flat sheets, trays, top covers or pallets. CPZ (EMA+CPZ) Compact palletizer, with in line displacement. Customized gripper with frame to collect bottles layer.	Stackable bottles. Volume > 5 L.	<ul style="list-style-type: none"> · Trays, top cover and flat sheets warehouse. · Automatic tray forming unit. · Automatic dispenser of layer of film between levels, over bottle's neck (roll of film supply). · Pallets warehouse, feeding unit. · Motorized chain or roller pallet conveyor. · Automatic wrapping unit. · Automatic strapping unit. · Mobile cart attending different blow molding lines from palletizers up to wrapping/strapping line or warehouse
BCM / BCMS All in one: layer making and bagging machine. Compact and flexible, with motorized belt conveyor to position bags or single bottles onto robot picking up area.	RPZ (BCM/BCMS+RPZ) Palletizing robot-rotary column. Customized gripper with frame that can collect container's layer, flat sheets, trays, top covers or pallets. CPZ (BCM/BCMS+CPZ) Compact palletizer, with in line displacement. Customized gripper with frame to collect bottles layer.	Upside trays, inverted trays, flat sheets, cover and plastic bags. The complete system is able to palletize bottles either in bags, trays or interlayers. All possibilities in only one machine!	



BCMh12-A1000+RPZ



BMS+CPZ

ROBOT SOLUTIONS

Automation operations through robots, generally placed at the end of the line.

RA Anthropomorphic robot

CHARACTERISTICS

- Gripper with customized AND/OR design depending on line requirements
- Easy to handle and quick changeover
- High autonomy (to be defined according to needs)
- Fully automatic system
- Light and fast, allowing the maximum process efficiency.
- Lasting: very long maintenance intervals.
- Space saving: uses the available space in an efficient way, with the maximum accuracy.



RA



RC

RC Collaborative robot

CHARACTERISTICS

- Gripper with customized AND/OR design depending on line requirement.
- Uninterrupted production line.
- High accuracy and errors reduction.
- Increased productivity: operators are not doing repetitive works, avoiding tiredness and production accidents.
- Safety first: thanks to its high collaborative performance and also the possibility to stop immediately when meeting resistance, ensuring safety between the co-worker, the handled bottles and the production equipment.
- Implementation flexibility: RC robots can be assembled in any angle and be installed anywhere, with a minimum impact in production lines.

AUTOMATED GUIDED VEHICLES

Thanks to its design and operational flexibility, the AND/OR mobile carts systems can be easily integrated in existing production plants, with no need of machine movements or civil works. It allows the transport of pallets, boxes, bottle layers, etc. The navigation system and the mechanical solution are designed as per specific project needs.

AUTOMATIC VEHICLES

Automatic vehicles, called AGV: Automatic Guided Vehicle and ASV: Automatic Smart Vehicle, are mobile vehicles with electric supply by rechargeable batteries.



CMOV



CMOV

CHARACTERISTICS

- Flexibility and versatility
- Easily scalable
- Easy relocation
- Navigation and mapping incorporated
- Artificial intelligence
- Safety
- Silent
- Energy regeneration system

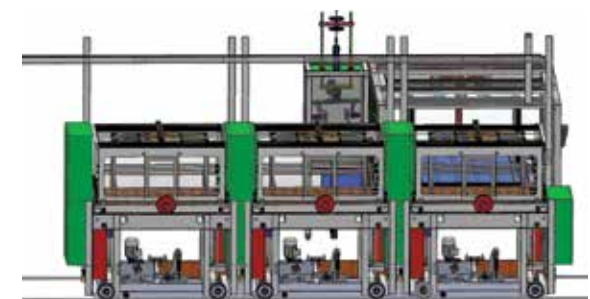
ADVANTAGES

- Traceability / intralogistics
- Minimization plant movements
- Reduce the costs of indoor transportation
- Does not require any human intervention
- Set up time is minimal (available from the first day)
- Several vehicles working together: they identify each other

The AND/OR AGV is specially designed for plastic industry. It is the ideal solution for flexible blow molding line automation, which require intensive work and complex production flows

Several models are available according to your needs.

	AGV (Automatic Guided Vehicle)	ASV (Automatic Smart Vehicle)
MOBILITY	Bidirectional 360°	
NAVIGATION	Guided by magnetic tape	Automatic mapping, intelligent system



GUIDED CARTS

GUIDED CARTS

Rail guided carts with supply by catenary.

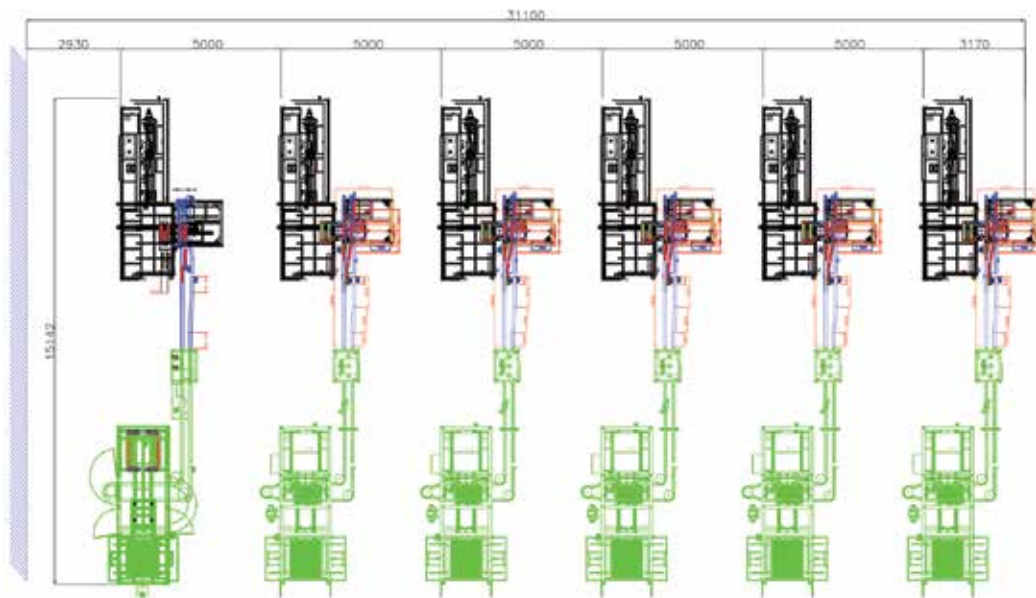


ENGINEERING AND TURN-KEY PROJECTS

Thanks to its experience since 1986 in automation processes associated to the manufacturing of plastic bottles, AND&OR undertakes complete tailor-made projects for the blow molding industry.

Simultaneously, the engineering department is constantly in contact with our clients, providing counseling and support for the design and supply of complete packaging lines and for the purchase of specific machinery, either of its own manufacture or from recommended machine's manufacturers.

- CAD service, lay-out definition.
- Positioning of machines in order to optimized spaces and daily logistics within the factory.
- Complete process automation for containers manufacturing.
- Central control systems. Controlling and monitoring factory raw material consumption, products traceability, production obtained per work shift, machines efficiency, warehouse management, direct costs, etc.







HANDLING YOUR NEEDS

SINCE 1986



HANDLING YOUR NEEDS

SINCE 1986

AND&OR SPAIN

Headquarters and factory

Av. De Europa, 6 – Pl El Limón
41928 Palomares del río (Sevilla)
SPAIN

Phone: +34 954 779200
andyor@andyor.com

AND&OR 2, SPAIN

**Specialized plant for quality
control and assembly**

Calle de la Tecnología, 2
541120 Gelves (Sevilla) SPAIN

Phone.: +34 954 872590
andyor@andyor.com

AND&OR AMERICA

77225 NW 25th st, Suite #107
33122 Miami (FL) USA

Phone: +1 (786) 602-4187
usa@andyor.com

AND&OR BELGIUM

Rue des Anciens Etangs 40,
1190 Brussels, BELGIUM

Phone: +34 680 575 411
europe@andyor.com

AND&OR CHINA

Next opening 2020

