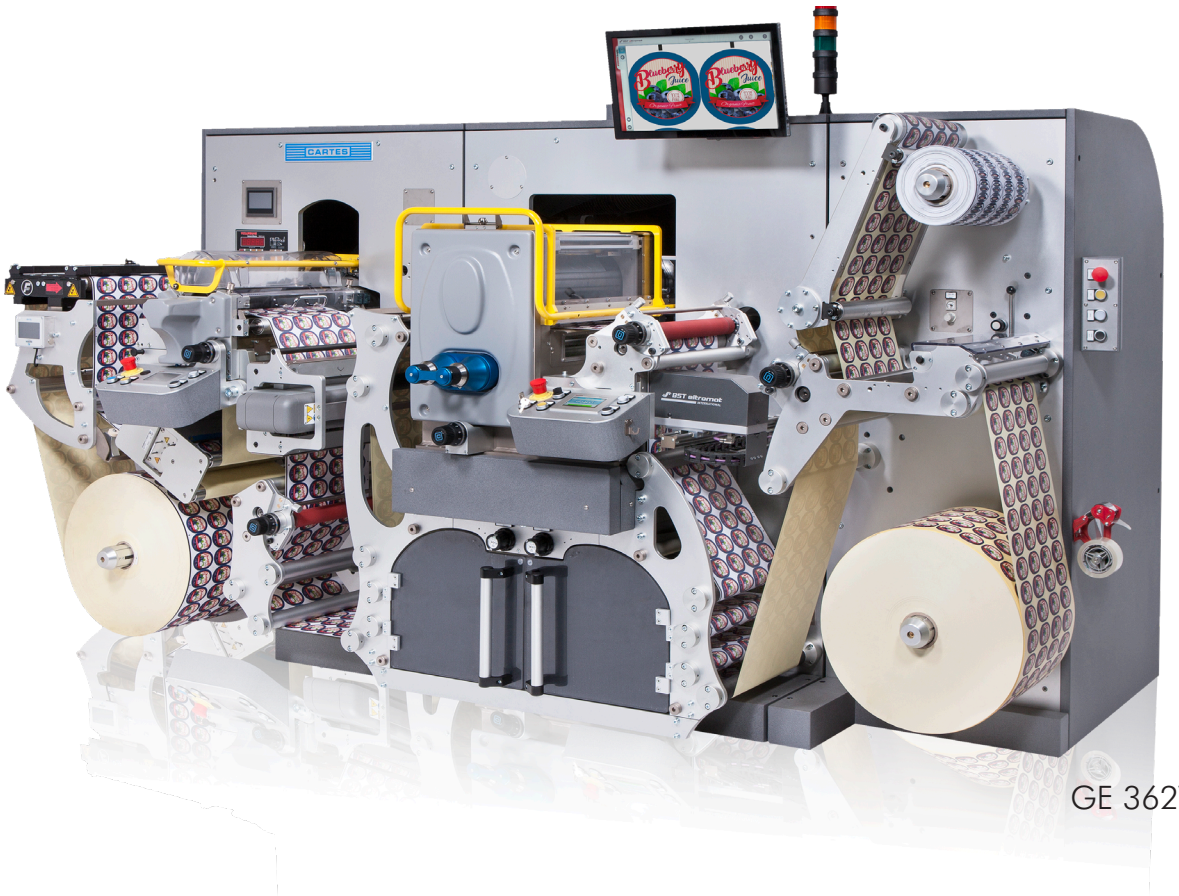
CARTES

ADVANCED LABEL TECHNOLOGY

English

GEMINI series

Finishing solutions for labels



GE 362VR E-line

GEMINI SERIES
E-line and T-line

Industry 4.0

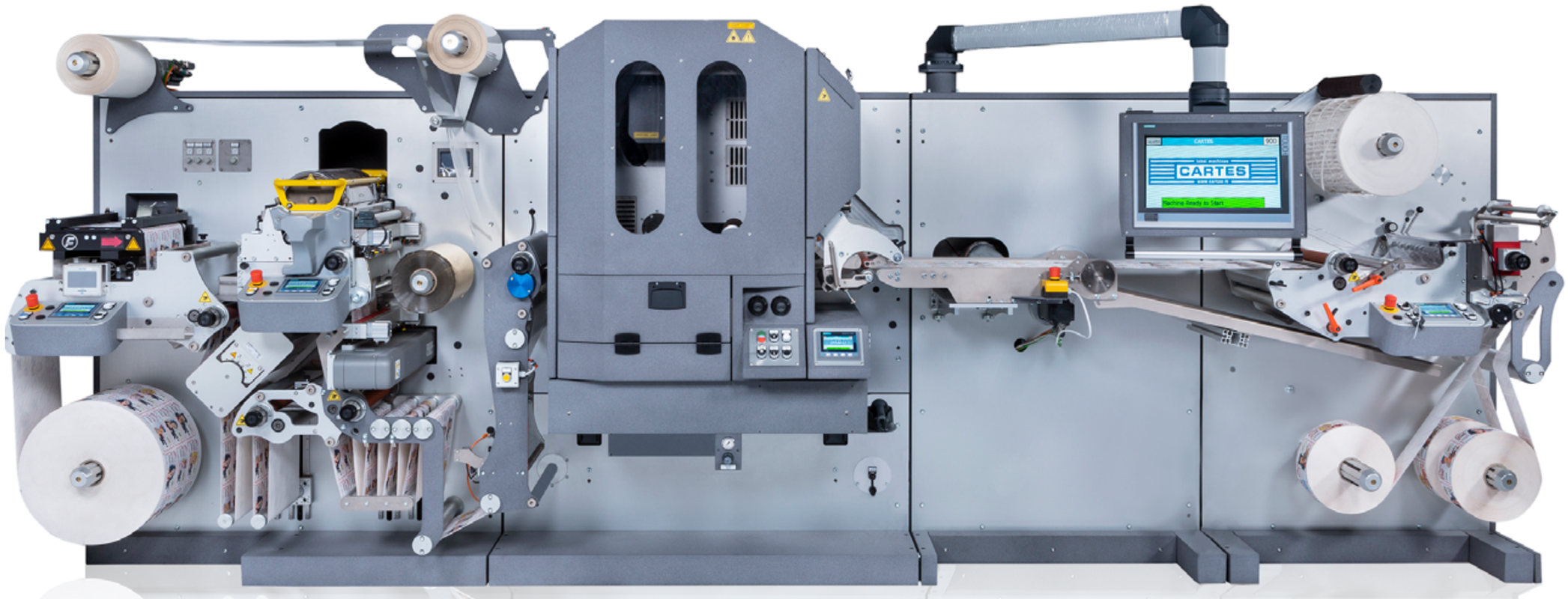
The finishing solutions

The GEMINI series machines represent the new frontier in Digital Converting: versatility, performance, waste reduction, the ability to save all processing parameters, reduced power consumption thanks to IGBT technology and energy regeneration.

LOW PRODUCTION COSTS GUARANTEED

EXTREME MODULARITY CONCEPT
(E-line version)

THE MOST VERSATILE SOLUTION FOR YOUR COMPANY



GE362WL T - line

Already “pioneers” in the application of Laser technology in the self-adhesive label market, thanks to the **ILC® INVISIBLE LASER CUTTING** system, it is possible to die-cut dark printed labels without typical and unsightly “white edge”.

Configurable with the following units:
Flexo printing and varnishing - Digital embellishment (JET D-SCREEN)
Semi-rotary die-cutting - Laser die-cutting.
Also available: **overlamination, cold foil applications, ILC®,**
IML label processing and others accessories.

GEMINI SERIES
Features

Maximum accuracy

Automatic centring device:
The machines can correct the possible gap irregularities detected on pre-printed materials, ensuring a maximum precision.

Energy saving

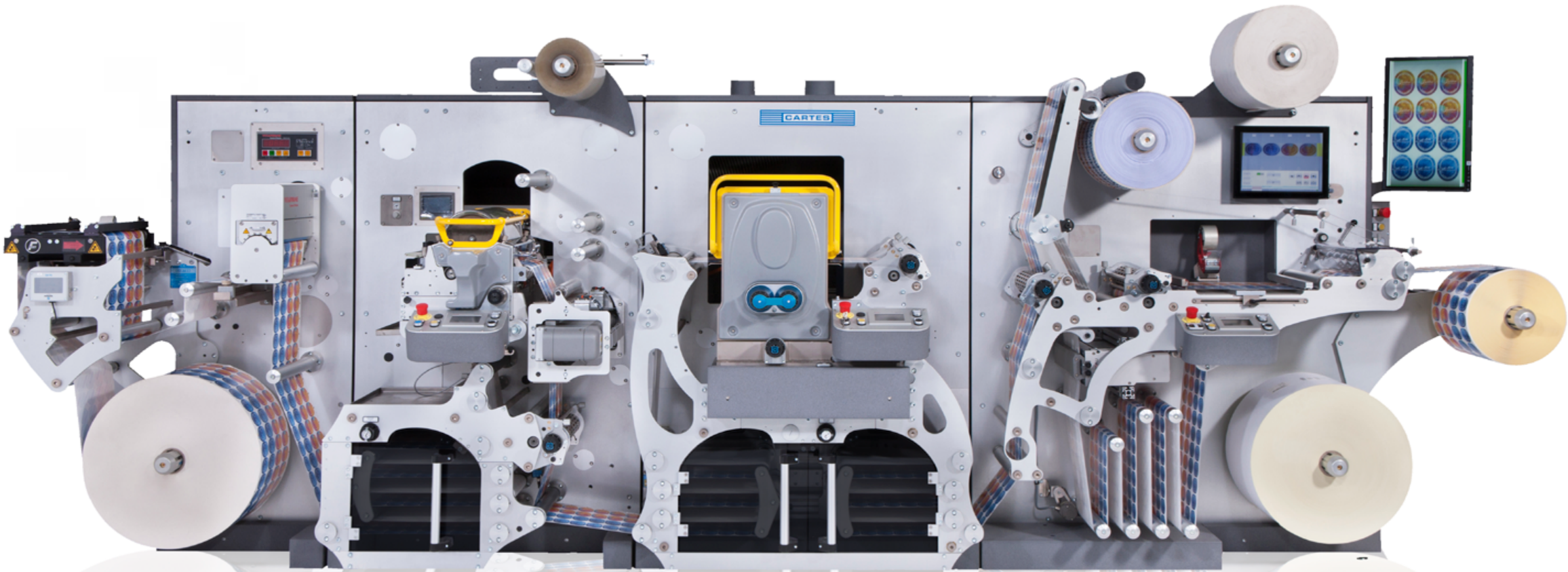
The IGBT technology and the centralized management system of drives power supply allow sharing energy between the motors during the operation of the machine; the energy released by the motors during braking phase is reused or even returned to the power grid that results in energy savings from 30 up to 40%.

Easy operation

Each unit is equipped with an indipendent touch screen control panel in order to ease the setting.

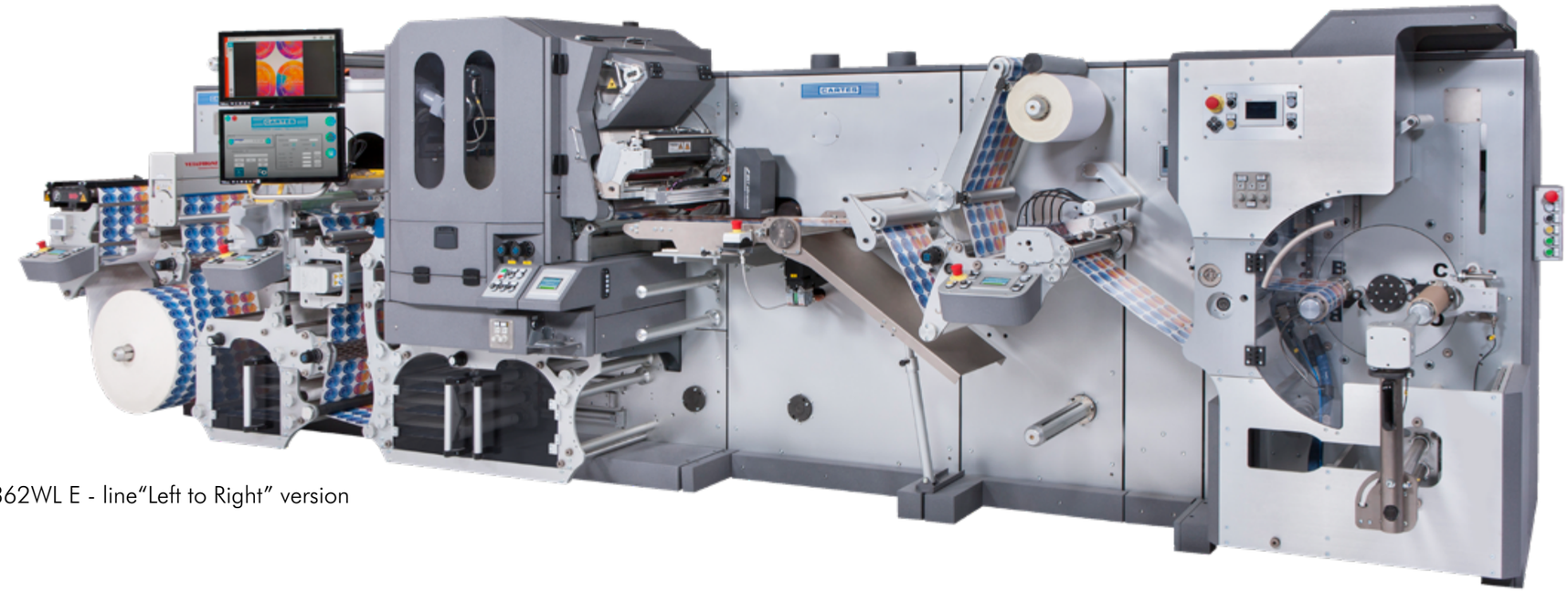
Remote connection

Our remote diagnostic system allows a CARTES specialist to remotely access your machine and analyze the problem and, often, fix the issue you are having right away.
The remote connection also is a simple way to receive software updates as soon as they are available in the future. If a service visit is necessary then one of our Service Engineers will arrive at your factory already knowing what the problem is, how to fix it, as well as what replacement parts are necessary.



GE362WR E-line with TC

GEMINI SERIES+ATR 360

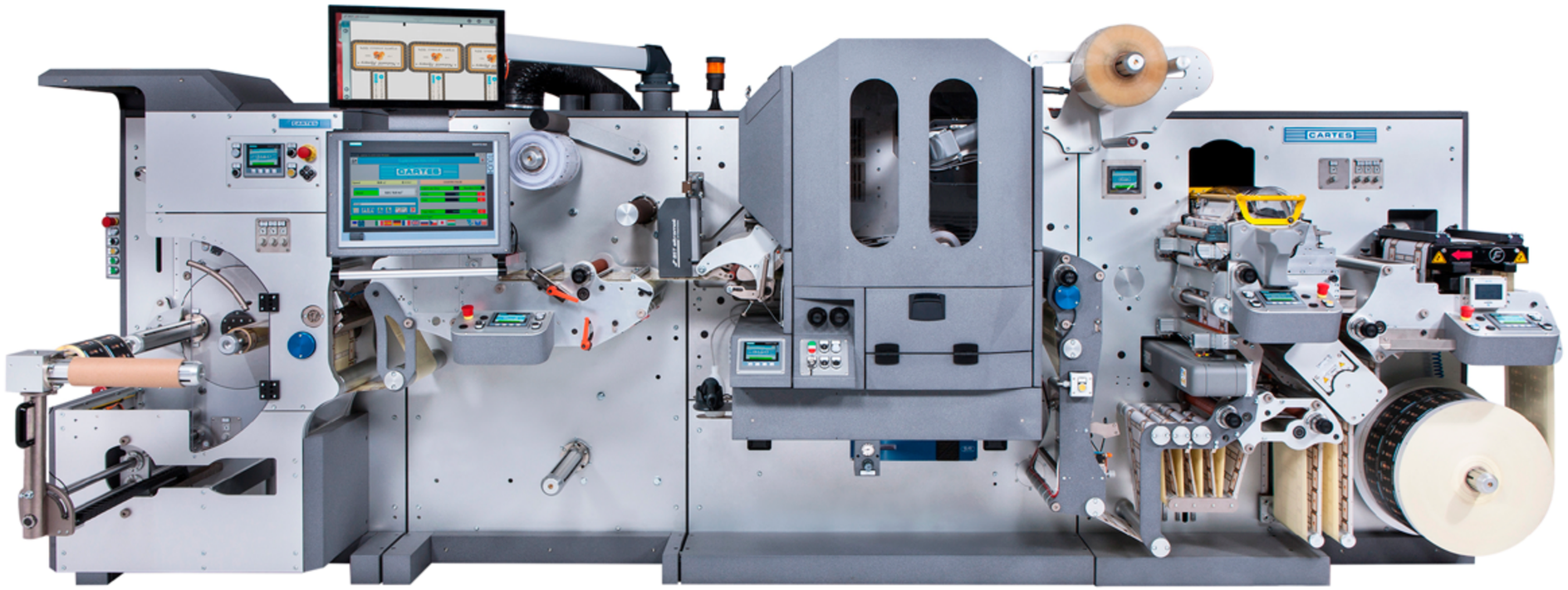


GE362WL E - line“Left to Right” version

In-line/off-line solution

Buffer for higher versatility to
convert labels either in-line or off-line.
Available in “Left to Right” and “Right to Left ”
web workflow versions.

Turret rewinder - ATR360



Turret rewinder - ATR360

GE362WL T - line“Right to Left” version

UI

GEMINI SERIES

Material input

Compact unwinder supplied with servo-driven pulling unit.

Pneumatic expansion shaft Ø 76 mm (3 in), rolls of material with external diameter up to Ø 600 mm (23.6 in) or 200 Kg (440 lb).
Optional diameter Ø 800 mm (31.5 in).
Automatic diameter control of the reel with sensor for automatic stop function at the material end.
Electronic web guide with edge or printed line sensor.
Automatic stop function at minimum diameter.
Splicing table and adhesive tape dispenser.

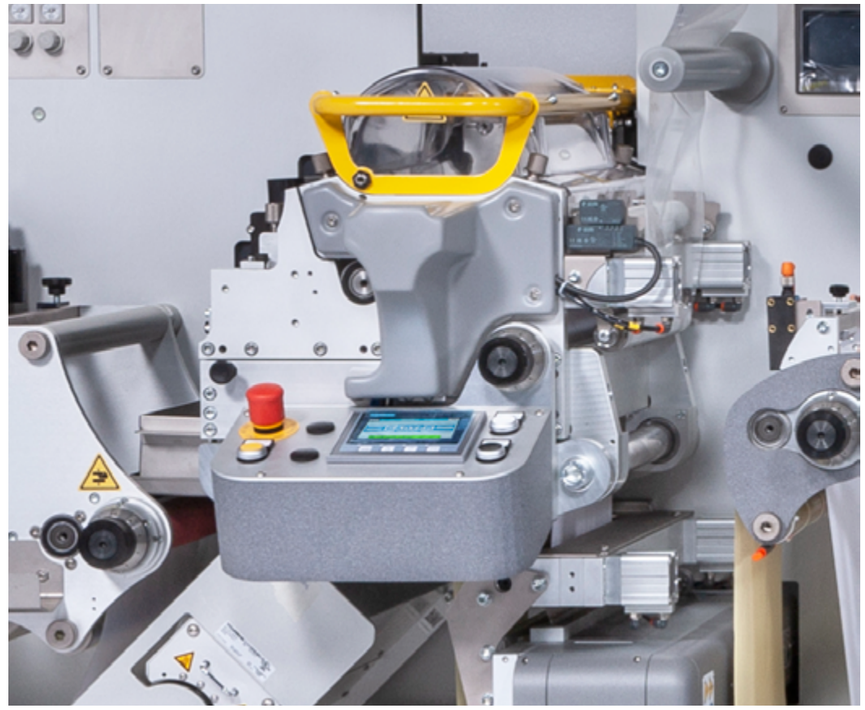
Flexo varnishing & protecting

FLEXO varnishing unit is available in three versions equipped with stepless UV dryer and TRESU closed chamber.

V — Unit able to work in full rotary mode.

Z — Unit for full rotary mode working, able for repeat cylinder changing (different Z values available).
Also, able for registering in full rotary mode.

W — Unit for semi-rotary mode working, also able for full rotary as well as for several repeat cylinder changing, incluiding registering.



Full & spot varnishing
Cold foiling application
Cast & Cure application
Selfwound overlamination
UV overlamination

JET D-SCREEN - GEMINI series

Industry 4.0

The Digital Embellishment

CARTES introduces the new high quality standard of "Digital Embellishment" special effects with its exclusive technology, JET D-SCREEN, able to create multi-layer effects such as 3D cast gold and braille printing.

The CARTES research and development department, has developed an innovative finishing technology that allows depositing a thicker layer of ink previously impossible to achieve with Ink technologies.

The work of the operator has been simplified extensively, allowing the selection of options from already predefined settings as well as the choice of the material to be used, thus achieving immediate production in the JDS unit without waste. Materials that are printed with the JDS system do not need to be varnished or treated before, these processes may distort the "texture" of the material.

The printing polymerization device consists of a hybrid LED/UV drying system that allows any type of material to be processed, even those most sensitive to temperature.

The JET D-SCREEN unit for digital Embellishment is the latest innovation in the wide range of CARTES developments. In a single step, it allows you to personalize and beautify labels, without tooling costs, with immediate start-up and without any waste of materials.

Modular, just as all CARTES technologies, it adapts to the requirements of Industry 4.0.

Advantages

- Until now, it has not been possible to achieve this level of Ink thickness with other
- Ink Jet Technologies.
- No tools required.
- Immediate job change.
- Material savings during start up.
- Adapting the image to printing.
- Immediate prior calculation of the necessary varnish contribution in the quote phase.
- CARTES own technology.
- Compatible with all materials, even natural ones and without special treatments for printing.
- Extremely low costs.

High thickness: over 200 micron

Multi-layer effects

Easy and user-friendly interface

Immediate embellishment with no tools required

GE362JJ

L Laser die-cutting

PATENTED

The **CARTES LASER CONVERTING UNIT** is the only existing on the market with an unlimited lifetime & Semi-sealed source that guarantees constant power and cutting quality, reducing to minimum management and maintenance costs.
Thanks to the Radio Frequency Laser power control and "Cut on the fly" software the machine can achieve maximum performance as it is possible to process in a single cycle any shape die-cutting & cut through, micro-perforation, engraving, progressive and regressive numbering.
All these jobs are digitally programmable in order to get products of the highest value in real time; moreover, the management software of the unit, allows to automatically save production parameters.
Today, **Laser converting** technology is, without any doubt, the most versatile solution on the market, being available in **SINGLE** or **DUAL** versions, in 350 W, and it is suitable for paper & films.

CARTES never ceases to amaze.
Already "pioneers" in Laser technology application in the self-adhesive label market, **CARTES** has developed a new "solution" named:
ILC® - INVISIBLE LASER CUTTING.
It is now possible to die-cut dark printed labels avoiding the typical and unsightly "white edge".

Moreover, the same system prevents adhesive from overflowing out of die-cutting label edges (glue bleed).
Thanks to the **ILC®** system there are no limits in processing materials with extremely thin liners (a few micron thick) including films, die-cutting and stripping "impossible shapes" or even linerless materials like **IML** labels.

PATENTED

ILC®
NO MORE WHITE EDGES ON DARK LABELS!

LASER UNLIMITED LIFETIME

Die-cutting, converting and matrix stripping of "impossible shapes"
Suitable for paper and plastic films
Perforation & micro-perforation
Etching
Engraving
Cut through with automatic pieces extraction
Kiss cutting
Numbering
Automatic workflow by the "Barcode reader"

R Semi-rotary die-cutting

PATENTED

The CARTES semi-rotary die-cutting unit with gearless system is completely controlled by servo motors and equipped with devices that ease the operator's work.
The application and replacement of the flexible die can be done in a few seconds thanks to the opening top cover that allowing the operator an easily access to the cylinder.
All data processing and parameters are visible in real time on the display and can be saved into the computer of the machine to be quickly reused.

Air Gap System (AGS®)

The innovative **AIR GAP SYSTEM** electronically adjust the distance between the die and the material, controlling the cutting depth with extremely accuracy.
By setting the die thickness from 0,4 mm (1/64 in) to 2 mm (5/64 in) and the liner thickness, become very easy to get a perfect die-cutting from the first cycle.
System is complete with safety features that avoids the possible breaking of the die caused by a wrong adjustment.

Image Distortion System (IDS®)

This software makes possible to automatically adapt dies created for cylinders of different development.
Moreover, the software can widen or narrow up to 20% and maximum five die-cutting paths keeping constant the interspace between them.
Thanks to this distortion it is possible to use flexible dies created for magnetic cylinders with other developments and also to obtain a wider range of shapes with no need to buy and store new dies.

AIR GAP SYSTEM (AGS®)

IMAGE DISTORTION SYSTEM (IDS®)

UO

Material output

Rewinder with longitudinal slitting and waste removing systems

Fully servo assisted rewinding system, supplied with two air expansion shafts Ø 76 mm (3 in) with automatic tensioning control, one for rolls of material up to:

- Ø 600 mm (23.6 in);
- Ø 800 mm (31.5 in) - optional;
- Second for rolls up to Ø 500 mm (20 in)- optional;
- One air expansion shaft Ø 76 mm (3 in), with motorized stripping system for rolls of waste up to Ø 600 mm (23.6 in).

Rewinding shafts enabled for clockwise and counter-clockwise spinning.

RC 360 L - Slitting system with swinging razor blades.
RC 360 LC - Slitting system with shear blades and swinging razor blades.

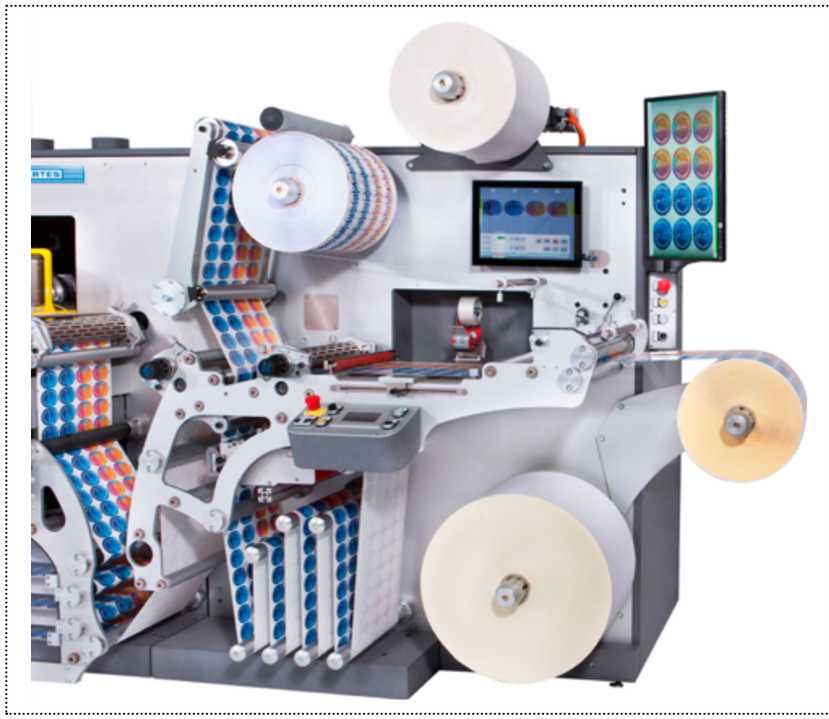
Rewinder / with longitudinal slitting and Inspection table

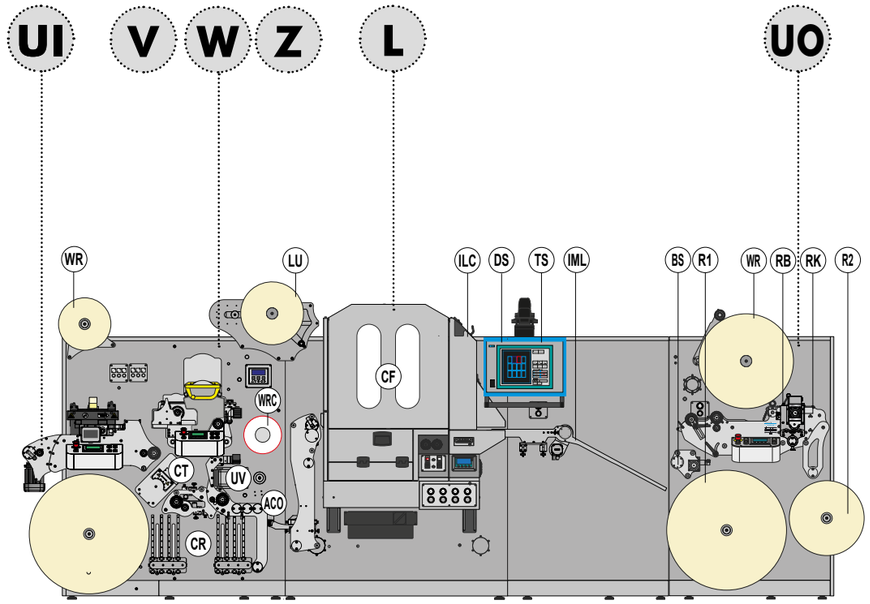
Fully servo assisted rewinding system, with rewinding shafts enabled for clockwise and counter-clockwise spinning, complete with:

- One air expansion shaft with automatic tensioning control system, for web rewinding up to Ø 600 mm (23.6 in);
- Web rewinding up to Ø 800 mm (31.5 in) - optional;
- Second for rolls up to Ø 500 mm (20 in) - optional;
- One air expansion shaft Ø 76 mm (3 in), with motorized stripping system for rolls of waste up to Ø 600 mm (23.6 in);
- Slitting unit by swinging razor blades.

The BST group is positioned after the matrix removing system and is composed of the following devices:

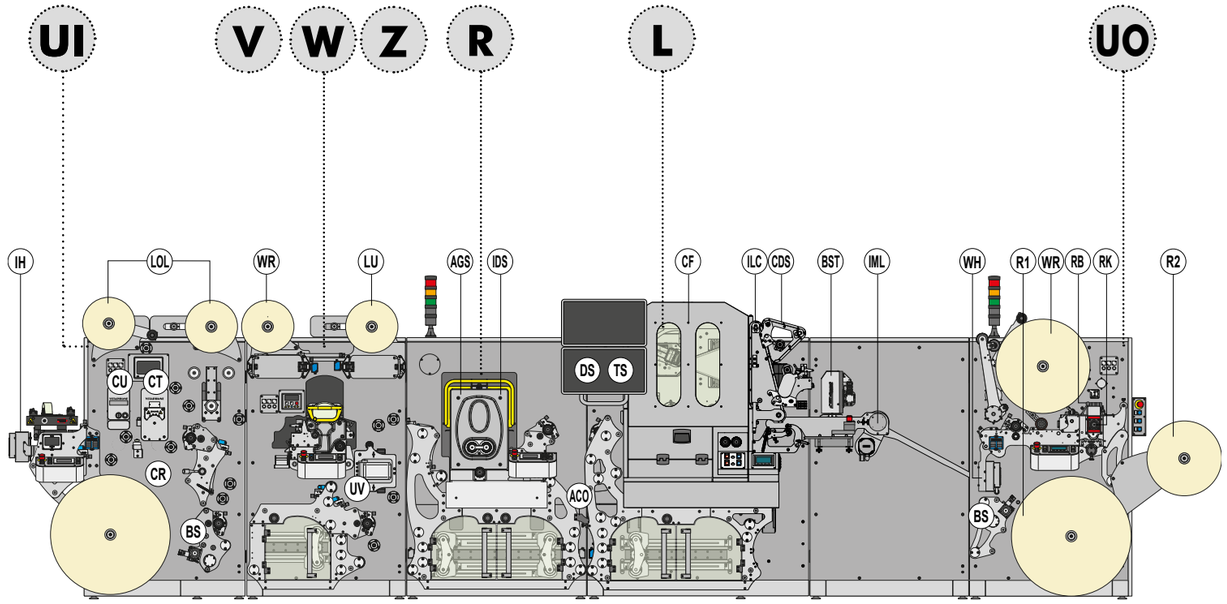
- BST Tubescan inspection system with control table, counter, missing label, matrix removal, job safe, defect detection;
- Web handling control system: this device allows you to stop web running for label replacing also following setting tolerance and correcting when exceeded;
- Static buffer;
- Cutting and joining surface (where the error detected by the BST system is placed);
- Special UV illumination + PDF validation software (optional);
- Pneumatic expansion shaft Ø 76mm with automatic tensioning control system, for liner waste/rewinding (optional).





Images may show options not included on standard machines

GE362WL



Images may show options not included on standard machines

GE363WRL

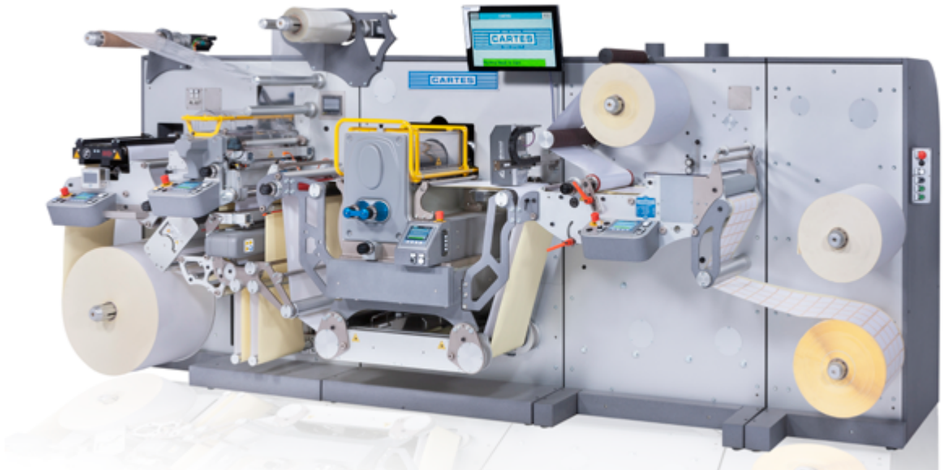
Legend

UI	**Material Input**	**Z**	**Flexo printing and varnishing full rotary mode**	**L**	**LASER die-cutting unit**	**UO**	**Material output**
IH	Input heater		and possibility to change the printing cylinder	CF	Cutting unit in continuous mode «Cut-on-the-fly»	WH	Web heater to ease stripping
CT	Corona treatment	UV	UV lamp	TS	Touch screen control panel	RB	Slitting with swinging razor blade system
CU	Web cleaner	WR	Liner / Waste rewinder	DS	Smart & Data Storage	RK	Slitting with scissor blade and razor blades system
LOL	LABELS ON LABELS: label applicator in register	LU	UV Lamination- Cold foil	ILC	Invisible Laser Cutting system ILC®	BS	Back score slitting
BS	Back score slitting	WRC	Cold foil / Waste rewinder	CDS	Cleaning Device System for ILC®	WR	Liner / Waste rewinder Ø 600 mm (23.6 in)
CR	Remote connection	**R**	**Semi-rotary die-cutting**	IML	In-Mould Label (IML) processing system	R1	Rewinding shaft Ø 600 (23.6 in) or Ø 800 mm (31.5 in) optional
W	**Flexo printing and varnishing full & semirotary mode**	AGS	Air gap system®	ACO	Barcode reader for an automatic workflow	R2	Second rewinding shaft 500 mm
V	**Flexo printing and varnishing full rotary mode**	IDS	Image distortion system®	BST	POWERSCOPE - Label video inspection system		

GE362VL E-line

Technical data - Gemini E-line

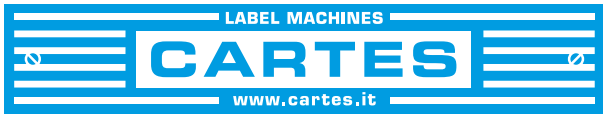
General	**Max web width**	360 mm - (14 in)
	Min web width	100 mm - (4 in)
	Max unwinding & rewinding roll diameter	600 mm - (23.6 in) or optional 800 mm - (31.5 in)
	Maximum matrix roll diameter	650 mm - (25.6 in)
	Pneumatic contact stripping system	included
	Motorized stripping system	optional
Longitudinal slitting	**Swinging razor blades**	min 15 mm - (0.6 in)
	Shear knives and razor blades	min 15 mm - (0.6 in) optional
Flexo printing and varnishing unit	**Repeat length on semi-rotary**	up to 350 mm - (13.8 in)
	Running speed in full rotary mode	up to 140 m/min - (459 feet/min)
UV Curing System	**Stepless Power**	from 40 to 160 W/cm
Semi-rotary die-cutting unit with AGS®	**Flexible dies thickness with Air Gap System**	up to 2 mm - (5/64 in)
	Dies adjusting range with Image Distortion System	+ 20% /- 10% of real cutting lenght optional
	Max tool repeat (22.3"/25.5"/30")	(508/560/610) mm - (20/22/24) in
	Running speed with 22.3" (Z 179)	up to 70 m/min - (229 ft/min)
	Running speed with 25.5" (Z 204)	up to 80 m/min - (262 ft/min) optional
	Running speed with 30" (Z 240)	up to 90 m/min - (295 ft/min) optional
Laser die-cutting unit	**Working area**	up to 350 mm - (13.8 in)
	Unlimited lifetime Laser source	semi-sealed® CO_2 self-refilling
	Single Laser power	350 Watt
	Double Laser power	350 W + 350 W
	Cutting path speed	up to 700 m/min - (2300 ft/min)
	Cutting spot size	170 μm
	Running speed	up to 140 m/min - (459ft/min)
Others	**Further optionals may be available soon**	



GE362VR-T-Line

Technical data - Gemini T-line

General	**Max web width**	360 mm - (14 in)
	Min web width	100 mm - (4 in)
	Max unwinding & rewinding roll diameter	600 mm - (23.6 in) or optional 800 mm - (31.5 in)
	Maximum matrix roll diameter	650 mm - (25.6 in)
	Pneumatic contact stripping system	included
	Motorized stripping system	optional
Longitudinal slitting	**Swinging razor blades**	min 15 mm - (0.6 in)
	Shear knives and razor blades	min 15 mm - (0.6 in) optional
Flexo printing and varnishing unit	**Repeat length on semi-rotary**	up to 350 mm - (13.8 in)
	Running speed in full rotary mode	up to 180 m/min - (590 ft/min)
UV Curing System	**Stepless Power**	from 40 to160 W/cm
Semi-rotary die cutting unit with AGS® and IDS®	**Flexible dies thickness with Air Gap System**	up to 2 mm - (5/64 in)
	Dies adjusting range with Image Distortion System	+/- 20% of real cutting lenght
	Max tool repeat (22.3"/25.5"/30")	(508/560/610) mm - (20/22/24) in
	Max cutting lenght with IDS ® (22.3"/25.5"/30")	(610/680/900) mm - (24/26.7/35.4) in
	Running speed with 22.3" (Z 179)	up to 100 m/min - (328 ft/min)
	Running speed with 25.5" (Z 204)	up to 120 m/min - (393.7 ft/min) optional
	Running speed with 30" (Z 240)	up to 140 m/min - (426.5 ft/min) optional
Laser die-cutting unit	**Working area**	up to 350 mm - (13.8 in)
	Unlimited life time Laser source	semi-sealed® CO_2 self-refilling
	Single Laser power	350 W
	Double Laser power	350 W + 350 W
	Cutting path speed	up to 700 m/min - (2300 ft/min)
	Cutting spot size	170 μm
	Running speed	up to 180 m/min - (590 ft/min)
Others	**Further optionals may be available soon**	



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