

LINACUT®

CUTTING MATERIAL COSTS

Working from coil is like processing a blank with infinite length. It therefore opens the nesting algorithms to unlimited options

- More than 10 % scrap rate reduction can be generated compared to traditional lasers,
- There is no limit in part length to be produced,
- Buying coil instead of blanks offers more saving on material cost.

CYCLE TIME REDUCTION

Using LINACUT®, the blank loading operation is no longer required. Coil replacement is only required when changing material specification. Optional PITSTOP® configuration allows strip insertion and re-coiling in less than 5 minutes, without manual operation. Feeding line parameter adjustment (guides, roll penetration, etc.) is automatic when starting a new production batch. Global production time can be reduced from 10 to 80 %.

PART COLLECTION AND SKELETON SCRAPPING:

This operation is the major issue for 2D laser table users. Problem is solved by LINACUT®! One 6 or 7 axis robot offload continuously the various parts nested in the strip (up to 10 references) and stack them as per the selected packing configuration. Pick up system will be adapted to customer requirement. If the part is longer than 2 meters (6 ft.), meaning not suitable for robot, it is evacuated at the end of the slat conveyor. Skeleton splitting is managed through the CAM processor. Scrap is dropped into a container at slat conveyor exit.

NON STOP PRODUCTION

Very long, (up to 8 hours non-stop), unmanned runs can be achieved. Coils up to 25 tons (55000 Lbs.) can be used:

With 1500 mm (60") width and 1mm (19 Ga) thickness, coil becomes an unlimited blank of 2000 meters (6500ft) which can be processed, non-stop, with very low scrap level.

INCREASED OUTPUT

Overall cutting and stacking time being lower, a significant O.E.E. (Overall Equipment Efficiency) increase is achieved and LINACUT® can reach a two to three times bigger output than a 2D laser table

ALSO A CUT-TO-LENGTH LINE !

Even if not built for that purpose, LINACUT® can also be used as a cut to length line. Sized blanks required by your turret punch presses or other lasers can be produced in-house, on request.

WORKING FROM COIL

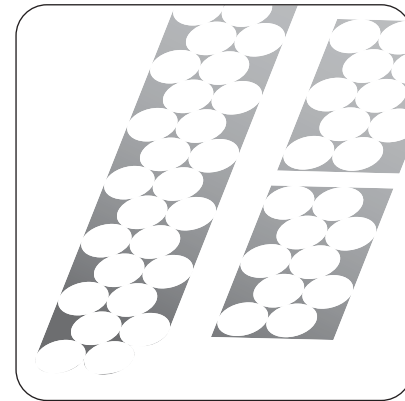
Coil weight capacity will be adapted according to the available handling means in the factory, and to the production requirement. Coils can be easily stored on the floor, no racks are required.

UNLIMITED PART LENGTH

LINACUT® is suitable for strip thickness from 0.3 mm to 4 mm, and blanks can be cut without length limit. Most of materials such as mild steel, high tensile steel, stainless steel, aluminum, copper can be cut by LINACUT®. LINACUT® is able to process material with specific plastic film. If required, the coil line can be fitted out with a film removing system prior to cutting.

IDEAL FOR O.E.M.

All people in sheet metal fabrication will find LINACUT® as a very flexible and efficient system.



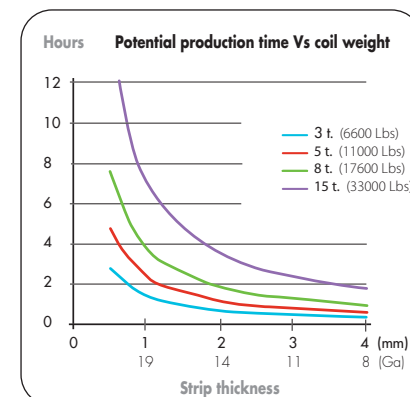
LINACUT®

LINACUT® will perfectly suit organizations which control the development of their own products (O.E.M.). They will be able to optimize product and process integration by creating a co-engineering dialog with DIMECO engineers.

Job shops, with significant order size, will also find LINACUT® to be as well very productive as able to keep the flexibility required by their market. Stamping shops will appreciate the LINACUT® output for their small or medium quantity job, without the need of creating a dedicated tool. Furthermore, LINACUT® will process HSLA with the same speed and quality as mild steel.

This is great equipment for prototypes, pre-production batches or components for niche vehicles. Tool cost and lead time to finalize product will be drastically reduced.

Blanks for hot forming process can also be generated by LINACUT® allowing final blank shape adaptation very easily.



FULL OPTION LINACUT®



Pit stop configuration with

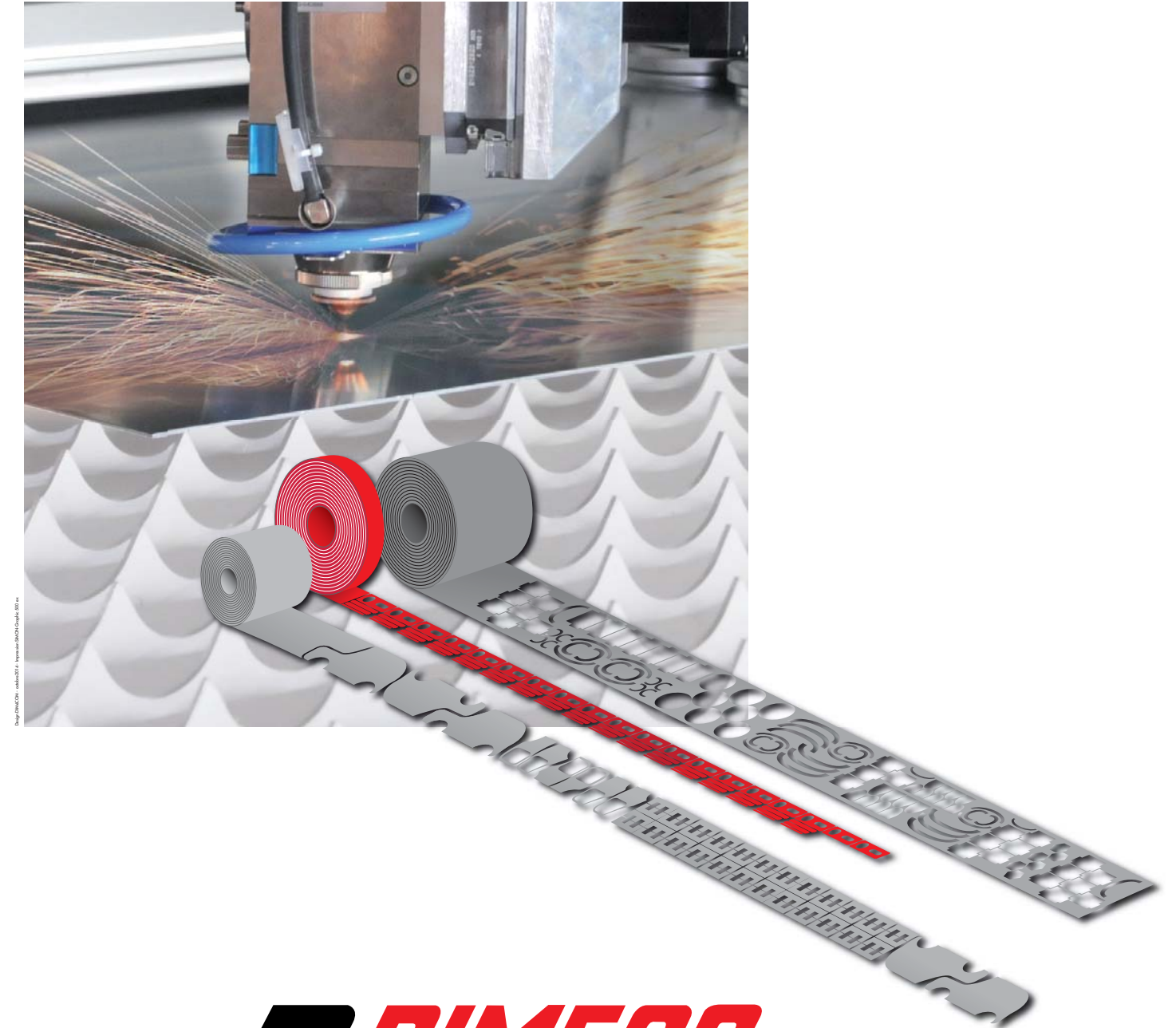
- 1 : Coil loading car
- 2 : Double sided uncoiler 2 x 6 tons
- 3 : Straightener with programmable parameters, line capacity 1500 x 0.3 to 2 mm (60" x 30 to 13 Ga)
- 4 : LINACUT®
 - 2 kW Rofin fiber laser
 - part sizes from 250 x 250 mm (10" x 10") up to 2500 x 750 (100" x 30") for robot pick up
 - longest part to be produced 3500mm (140')



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COIL-FED FIBER LASER



FLEXIBLE CONTINUOUS FORMING PROCESSES
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Linacut®

COIL PROCESSING LINES: DIMECO CORE BUSINESS

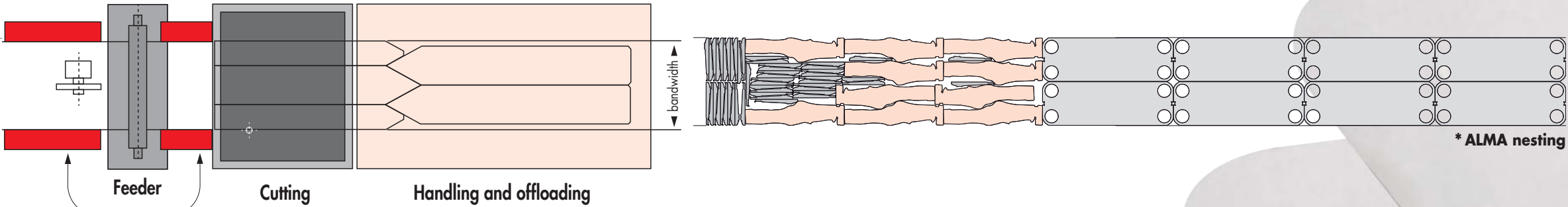
Always looking for more efficient solutions towards his customers, DIMECO designed his new LINACUT® concept combining the unmatched flexibility of laser cutting together with the performance of coil fed processes.

Built for sheet metal up to 4 mm thick (8 Ga), the concept uses an on purpose coil handling line, a LINACUT® continuous laser cutting module and a fully automatic part downloading system.

The LINACUT® line is the perfect complementary equipment to existing 2D laser tables and CNC turret punching machines.

ALMA ACT/CUT CAM SOFTWARE SUITE *

- 2D or 3D drawing import (unfolding as option)
- Automatic nesting of several parts together, with material consumption control
- Optimization of cutting head movement, with skeleton trimming program
- ISO code generation for export to Indramat control system
- Unloading robot management, automatic pick up positions control
- Production management.



Models	H (mm) in.		L (mm) in.	LT (mm) in.	
Laser power	2 kW	3 kW			
Linacut G			3150 124		
Linacut J	2550 100	2650 104	3650 144	4500 177	
Linacut L			4150 164		

Reference	Maxi strip width (mm) in.	Working area mm in.	Axis stroke mm in.			Axis speed m/min ft/min.			Position accuracy Pa (mm) thou.		Repeatability Ps (mm) thou.		Weight kg lbs.
			Xr	Y	Z	Xr	Y	Z	X+Xr	Y	X+Xr	Y	
Linacut G	1016 40	1016x1016 40x40	1016 40										12500 27500
Linacut J	1524 60	1016x1524 40x60	1016 40	1524 60	30 1,2	100 330	100 330	60 195	±0,05 ±2	±0,02 ±0,8	±0,03 ±1,2	±0,01 ±0,4	13500 29700
Linacut L	2000 78	1016x2000 40x78	2000 78										14500 31900



CONTROL
BOSCH-REXROTH (Indramat) MTX
numerical control
2 screens, one for line monitoring,
one for PC applications.



From 3 to 30 ton uncoiler, single side or double



We provide as well basic straighteners
as corrective leveller



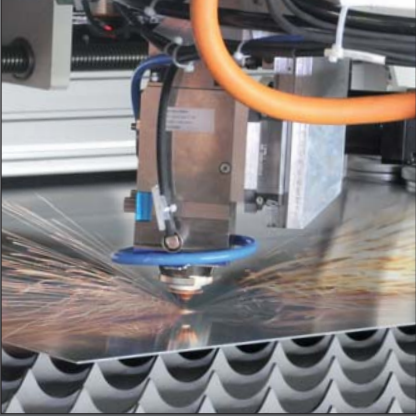
Fiber laser proof cabinet



Fiber laser source 2 to 3 kW
Fume & Dust collector



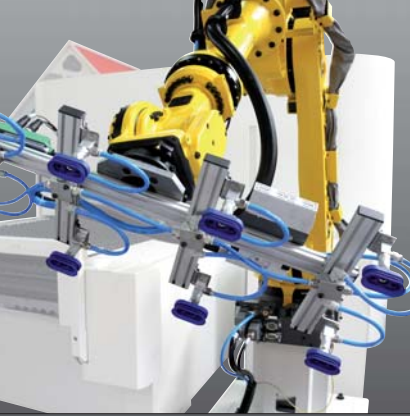
Strip feeding by servomotor



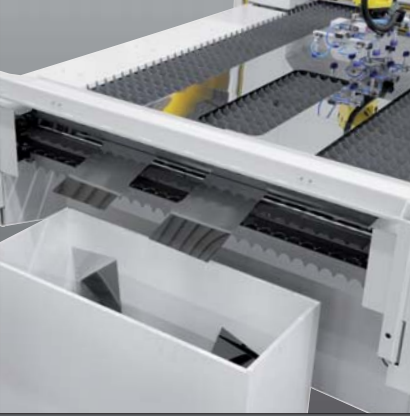
Laser cutting head with X & Y axis powered
by linear motors and Z axis by servo motor



Part unloading and stacking robot 6 to 7 axis



Pick up unit



Scrap collection. Slot conveyor for part
unloading powered by servomotor



Control board with CAD and nesting ability