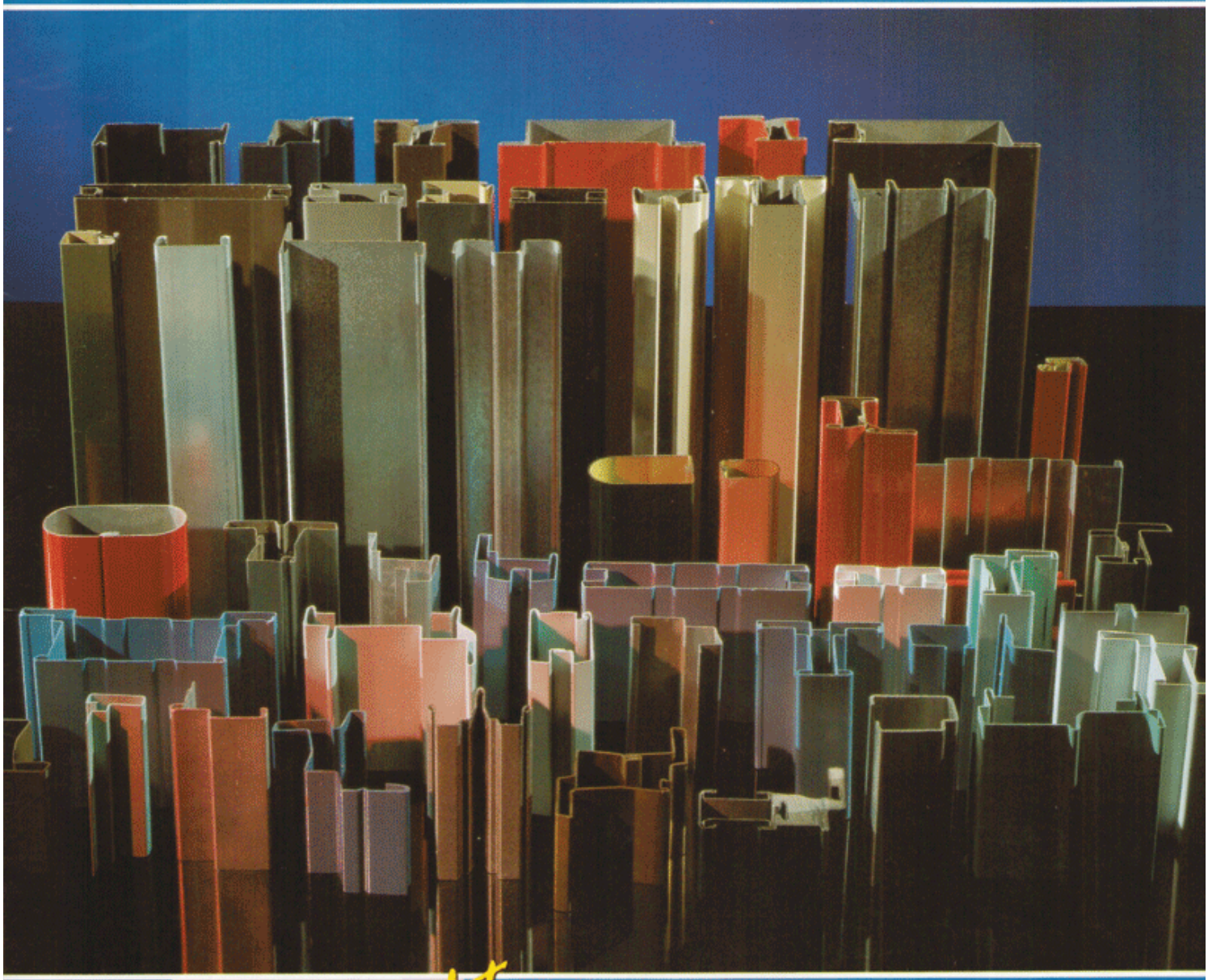
IMPIANTI & TECNOLOGIA PER PROFILATI IN ACCIAIO PREVERNICIATO

PLANTS AND TECHNOLOGY FOR PRODUCTION OF PREPAINTED STEEL PROFILES



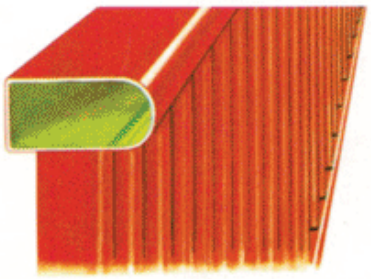
The right alternative...

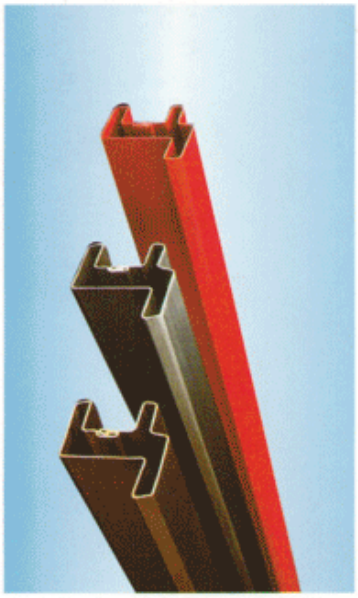
LESCO

Profilati aperti e chiusi per conto terzi

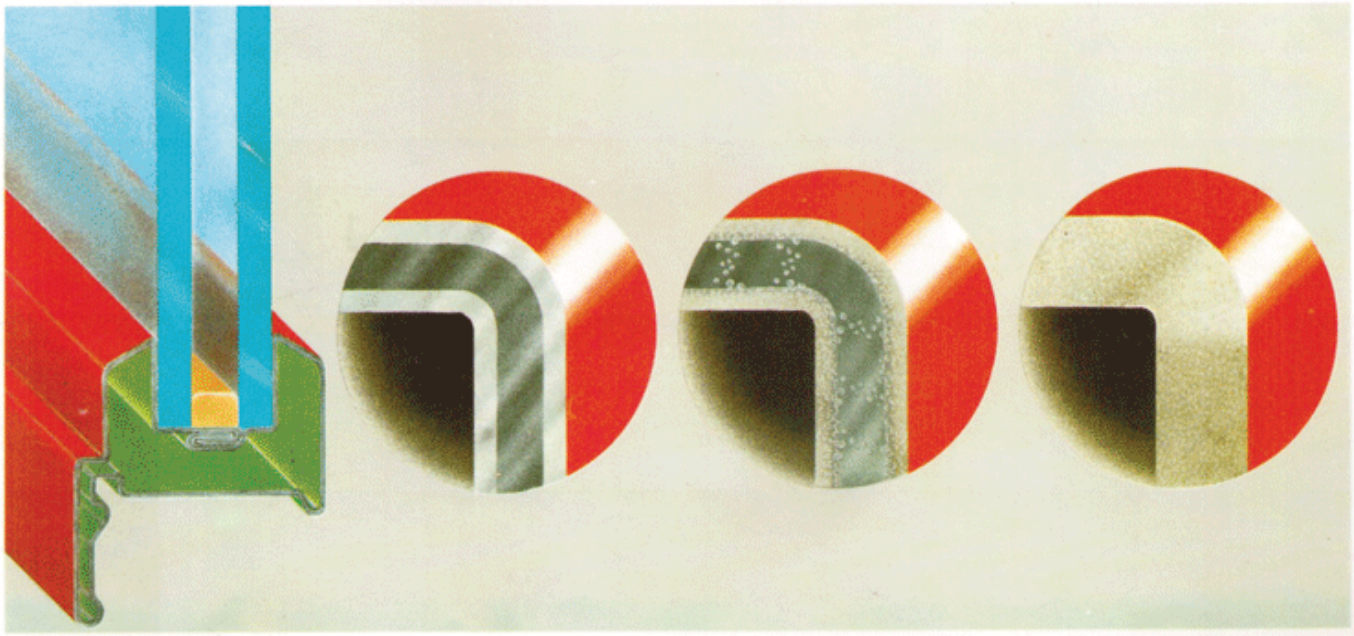
Open and closed profiles up to client design .....

It is common knowledge that the greatest enemy of the steel is rust.
This product of oxidation is formed by the presence of air and dampness and with continuous scaling it reduces the metal surface until it is totally destruction.
Less known is the ally that steel can count on for protection: zinc, the only element that can guarantee effective, long-lasting and economical protection.
What are the technical reasons why galvanization reaches these results?
To explain why, we must briefly draw the attention to several principles of electrochemistry: every mletal has its electrochemical potential. When two metals are immersed in an electrolyte there is a passage of electricity (current) like in a battery and, the metal which occupies the highest place in the scale (more electronegative) cathodes by sending its ions into the solution.
The metal that frees its ions acts as the anode, while the other acts as the cathode. Galvanizing gives iron double protection: physically and electrochemically.
The physical protection is assured by the zinc coating which materially isolates the steel from its environment - barrier effect - while the process of electrochemical protection is initiated, in the case of continuity of coating solution, as in the cutting zone, by the greater electronegativity of the zinc compared to steel.
As has already been said, this means that in the case of the formation of a Zn-Fe battery, the zinc "sacrifies" itself to protect the iron from attacks by corrosive agents: this is the cathodic protection which is particularly effective in the case of LESCO sections because of the reduced thickness of the metal.





Whit normal systems of anti-corrosion, the steel is covered with a protective film that ensures only a passive defence, and in the case of continuity of coat solution, the dampness penetrates beneath the layer and initiates the oxidation reaction.
As far as the iron oxides have a greater volume on topse of the metal, these oxides determine the detachment of the protective film in the zone, bearing a new part of the iron underneaht. The hot Sendzimir system with successive smoothing (skinpass) gives a coating which is not merely a simple surpeficial deposit of zinc on the steel, but a diffusion of the zinc in the steel. The layer of pure zinc is covered with a protective film of zinc oxide which, in dampness, is transformed into hydroxide and, with the complementary action of carbon dioxide, into insoluble basic zinc carbonate, which then completely recovers the cutting zone.
Moreover, there is a protective system for improving further the galvanizing results: prepainting of flat steel sheet, which consist of painting the galvanized product by special cycles (coil coating).
The lasting effect of protection by this system is almost doubled compared to the total effect of galvanizing and painting considered singly, that is to say more than double the life of the simple galvanizing. In fact, the synergic effect is realized between the galvanizing and painting, because the painting delays the starting of the sacrifical process of the zinc in its action to protect the steel.

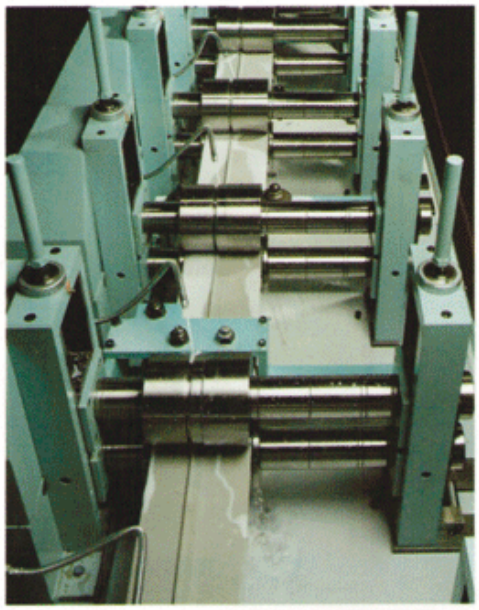


LESCO is a Corporation located near to Venice in north Italy. It was established in 1986, initially to carry on the overseas marketing of few Italian manufacturers of various systems for the cold roll forming of prepainted steel, then it has diversified into engineering/technology transfering including projection and technical assistance.

It is establishing its reputation as a most dynamic and agile expert in the cold roll forming of prepainted steel.

With the active development in the prepainted steel industry, demands for professional support and low initial investment has grown and Lesco has responded to such needs by undertaking a programme to meet each Client requirment, taking into consideration the different conditions of each Country. That is why we say Lesco is

the right alternative!



An unique system in the world of pre-painted steel frames, known as Lesco System presented in several countries throughout the world. The reason of its success is a highly advanced technology, developed by a very specialized team of technicians and utilized for the production of roll-formed prepainted steel sections.

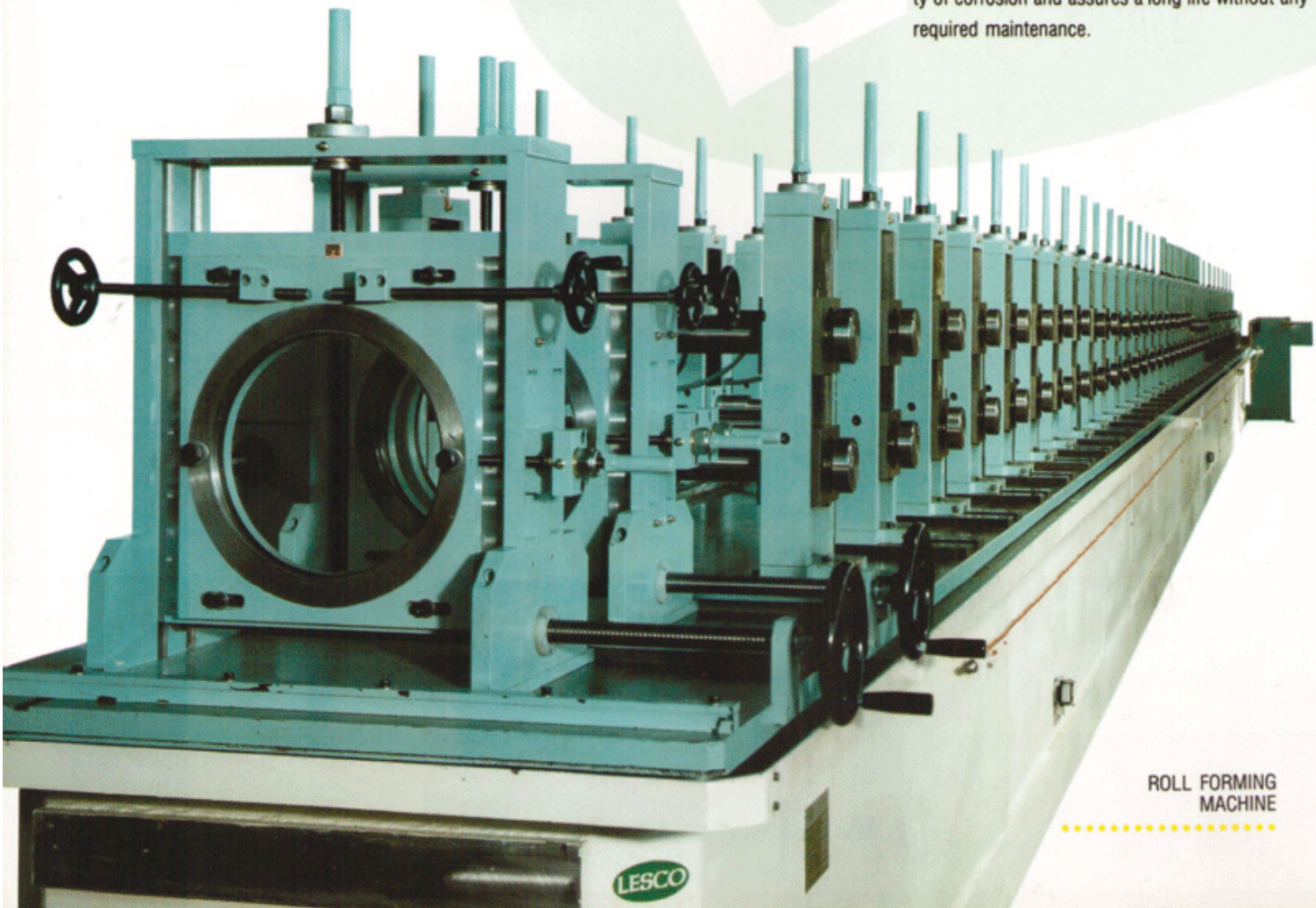
LESCO SYSTEM

The system is an integrated system consisting of: • galvanized, phosphatized and preenamelled steel profiles available in a wide range of colors; • assembly fittings; • special machinery and equipments utilized in the production line; • technical assistance during the various steps of installation and production.

The cold roll-forming of steel sheets allows the production of any type of profile designed specifically to achieve various different applications:

• windows (casement, sliding) fixed, top hung, bottom hung, etc.; • doors; • storefronts; • partitions; • railings and fences.

The system utilizes a perfected galvanization process done electrolytically on both surfaces of the steel and totally avoids the use of welding in the assembly, this eliminates completely the possibility of corrosion and assures a long life without any required maintenance.

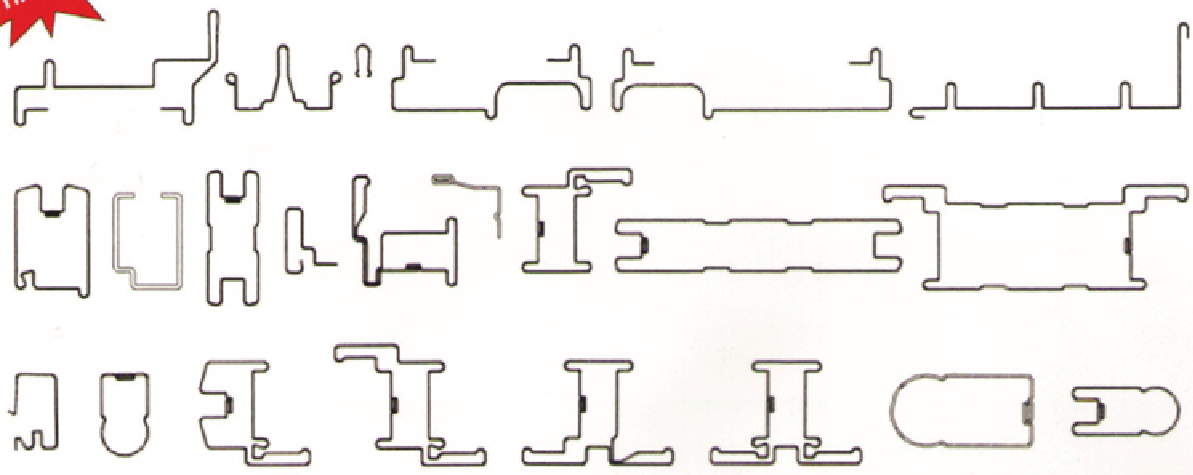


ROLL FORMING MACHINE

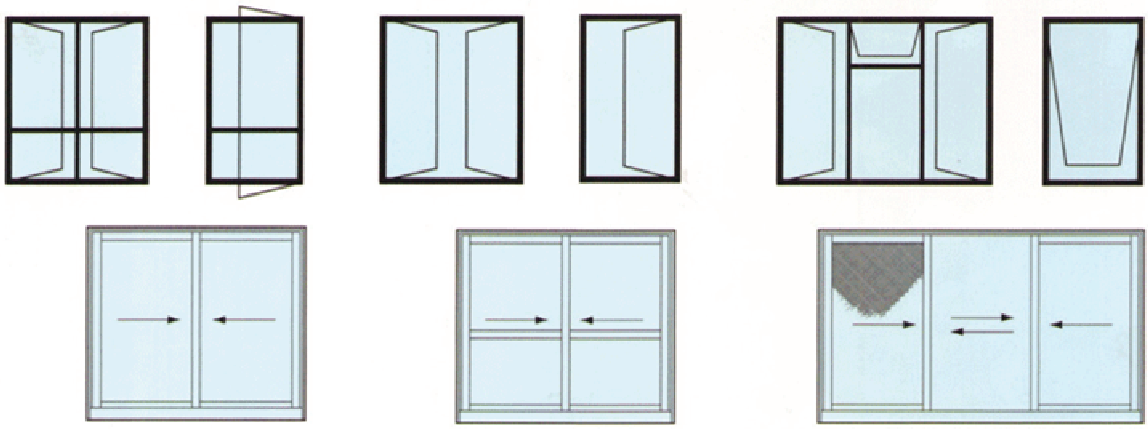
WINDOW AND DOOR TYPES SN - HIGH PERFORMANCE

FEW EXAMPLES OF LESCO SECTIONS SN SERIES

PATENTED



WINDOW AND DOOR TYPES SL - ECONOMICAL
LIGHT LIKE ALUMINIUM STRONG LIKE STEEL



FEW EXAMPLES OF LESCO SECTIONS SL SERIES

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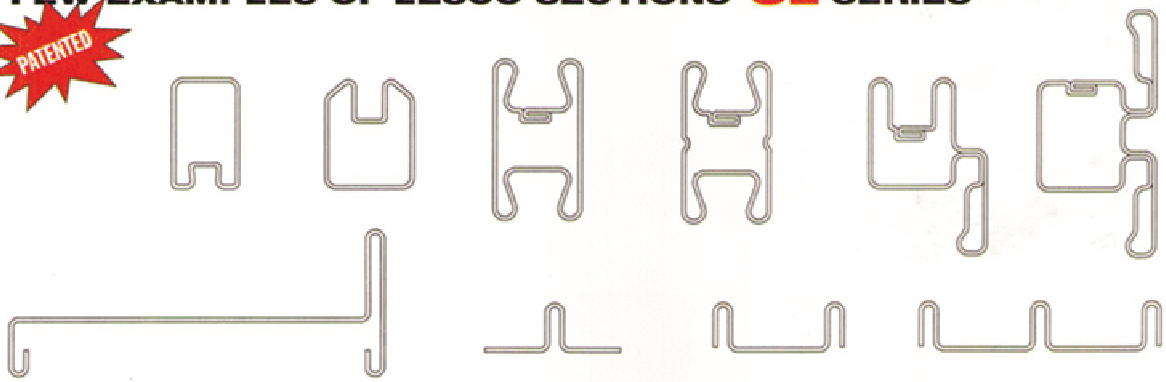
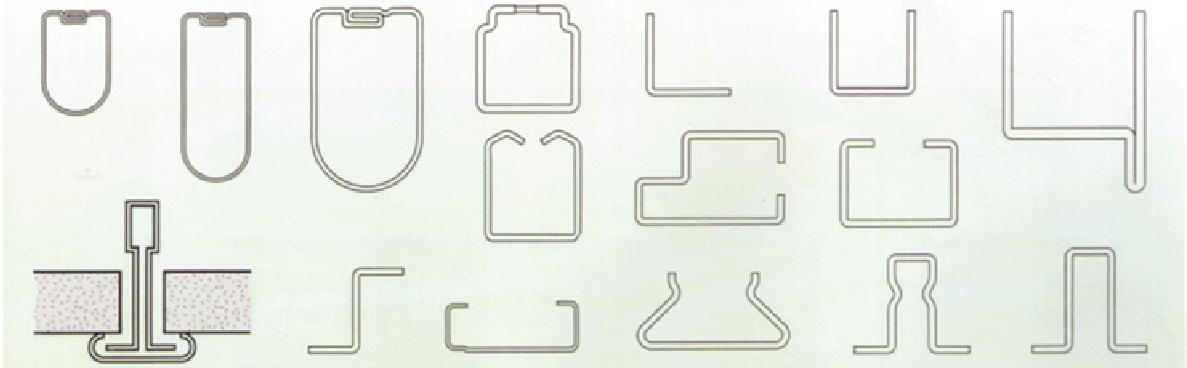
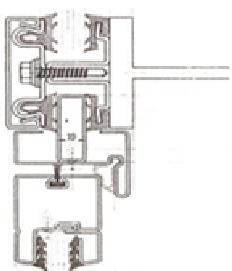


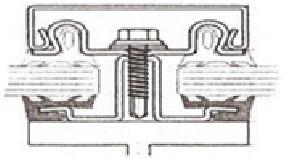
ESEMPI DI PROFILATI APERTI E CHIUSI PER CONTO TERZI IN INOX, ACCIAIO PRE-VERNICIATO, ZINCATTO, RAME, ALLUMINIO ecc., CON SPESSORE MASSIMO 6 mm.

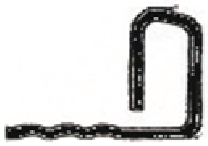
EXAMPLES OF OPENED AND CLOSED PROFILES UP TO CLIENT DESIGN IN STAIN-LESS STEEL, PREPAINTED STEEL, GALVANIZED STEEL, COPPER, ALUMINIUM etc., WITH MAXIMUM THICKNESS 6 mm.

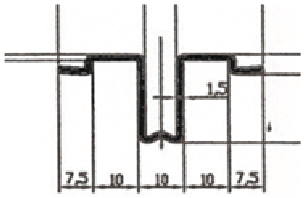


SV & CURTAIN WALL PROFILES



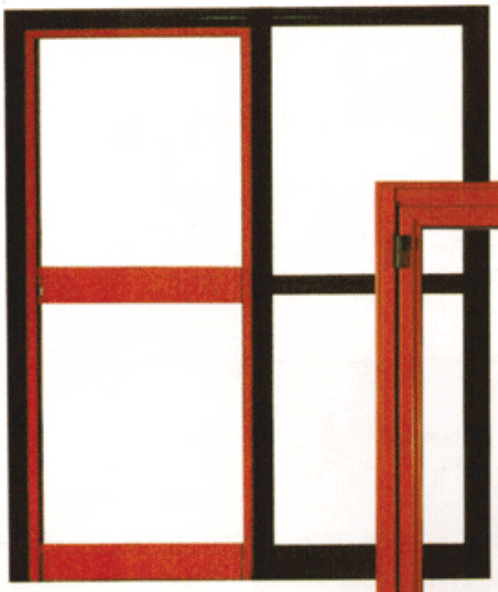




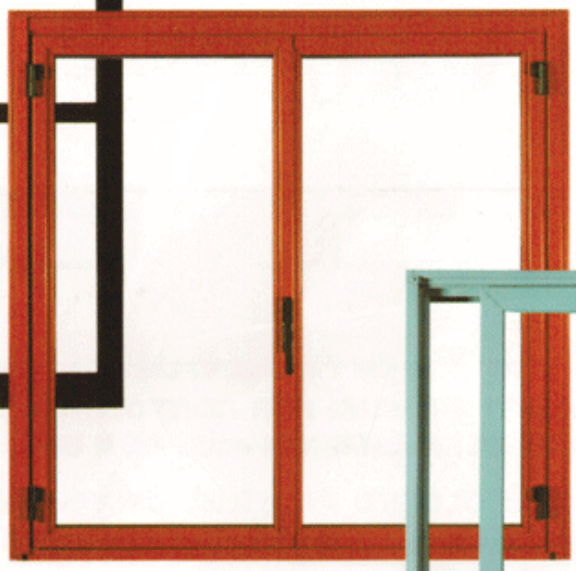


EXAMPLES FOR FEW PRODUCTS IN PREPAINTED STEEL

DOOR



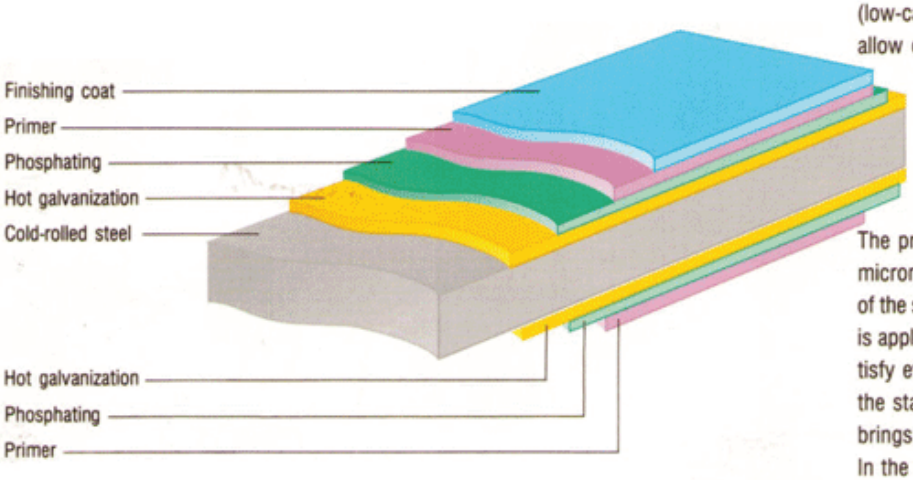
SIDE HUNG WINDOW



SLIDING WINDOW

FENCE

QUALITY STANDARD OF PREPAINTED STEEL SECTIONS



The sections are cold formed from galvanized sheet metal strips; they are pretreated and prepainted. Other materials such as: stainless steel, copper, aluminium and special alloys can be used.

The sheet metal has the following specifications:

- basic material Fe P03 GZ 200 SC EU 142/79 ASTM A528 (low-carbon steel with mechanical specification such as to allow continuous forming);
- zinc coating: ASTM A525 Z200 200 gr/sq. mt. on both surfaces applied by the Sendzimir system and successively ''skin-pass'' (smoothing) to eli-eliminate all roughness.

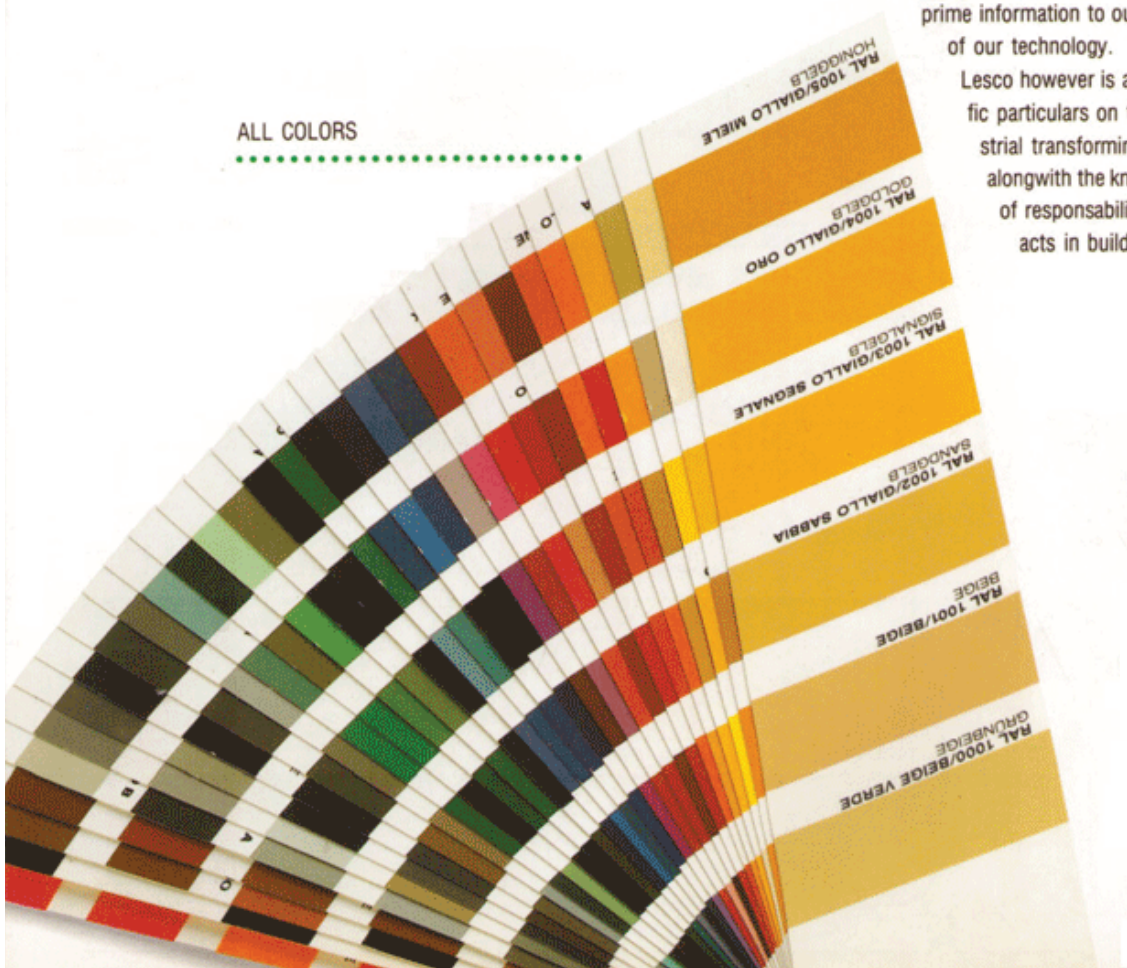
Successive treatments follow the cycle coil coating. The primer consists of a paint applied at a thickness of 7 microns on both surfaces and is suitable for the application of the successive coats of finishing paints. The finishing paint is applied on the outside surface. It's specifications can satisfy every testing and duration requirement necessary for the standards in force. It's thickness is 20 microns which brings the total thickness of the coating to 27 microns.

In the profiling stage, strips of an adhesive film of 90 ± 10 thick, are applied as protection.

With these brief notes on our company we hope we gave prime information to our clients and to the potential users of our technology.

Lesco however is at your complete disposal for specific particulars on the finished products, on the industrial transforming processes and their equipments alongwith the knowledge that come from the feeling of responsabilities of who has to inform whoever acts in building field.

ALL COLORS



LESCO

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