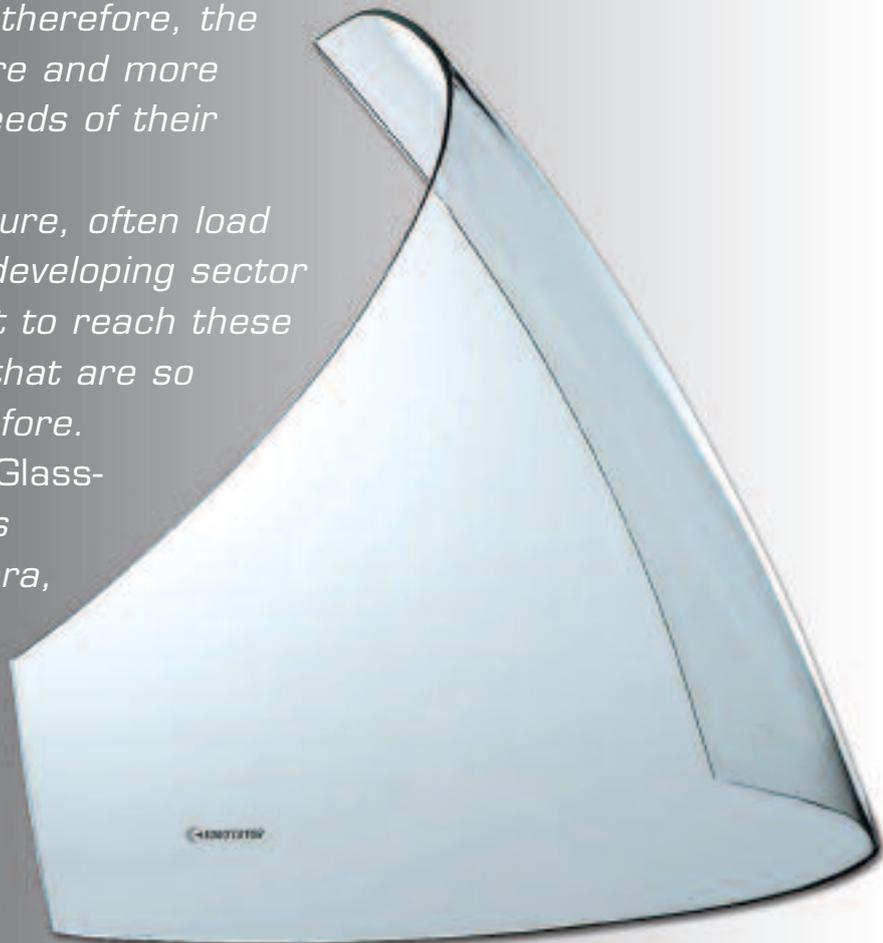


OMV Vismara and Nuova Protex: facing market needs and demands together

The continuously increasing and more complex needs of glassmakers, in turn in response to market input, oblige machinery manufacturers to construct machines that have higher performance and, therefore, the planning of plants that are more and more complex to satisfy in full the needs of their clients.

Simple glass becomes a structure, often load bearing, and the continuously developing sector requests constant commitment to reach these products and results in times that are so short they were unthinkable before.

Of this Nuova Protex spoke to Glass-Technology International and its machinery supplier OMV Vismara, from which it recently acquired a second horizontal drill for the production of glass for architectural and automotive sectors.



OMV Vismara has been present in the sector for drills since 1981. The planning phases of its machines are carried out completely in-house, and, in this way, the company is always more able to respond to the specific requests of its clients.

The main characteristics of OMV Vismara's machines are their technological flexibility, ease of use, and limited need for maintenance operations. Right from the beginning, OMV Vismara has always been in continuous evolution, with its products sold directly and by means of a network of representatives in Italy and internationally.

OMV Vismara manufactures a range of mono-head and multiple-head drills, horizontal and vertical, with the possibility of automatic loading and unloading of the glass sheets. The study and the realization of personalization features requested by clients, as per various production needs, are the basis of OMV Vismara's commitment and the relationship it has with glassworks.

THE HORIZONTAL DRILL FOR NUOVA PROTEX

Recently, OMV Vismara supplied its client Nuova Protex a horizontal drill, a *E8 CNH Plus*, which was easily positioned in the production line for shaped glass. This is not the first machine that Nuova Protex has acquired from OMV Vismara: the company already has a smaller horizontal drill that is also positioned in a horizontal production line.

Glass-Technology International was invited to visit Nuova Protex, where we spoke with the owners Mr. Gilberto Sacchi and Mr. Marco



**E8 CNH Plus
horizontal drill**

Pietra, who confirmed the good supplier/client relationship that it has with OMV Vismara and the complete availability of the latter to face and solve the problems and performance needs required by this new machine.

VERTICAL DRILLS

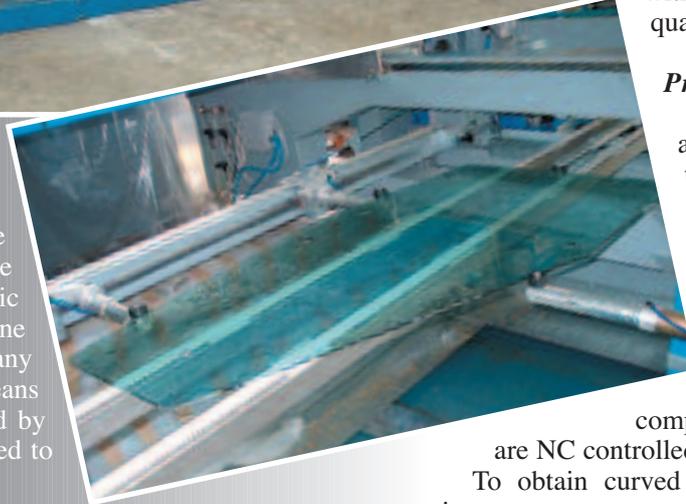
Other than the horizontal drills supplied to Nuova Protex, which process shaped glass horizontally, OMV Vismara also manufactures a vertical version of the drill – the *T.e.v.u. 5 Plus r/r*, which, thanks to a technical improvement; developed specifically for shaped glass, enables to process the same vertically, with the advantage that work changeover times have been completely eliminated.

NUOVA PROTEX

Nuova Protex is located near Pavia, northern Italy, and, since 1976, produces curved tempered glass for a number of sectors, such as automotive, small boats and agricultural machinery, furniture, refrigeration, shower cubicles, and so on. This diversification enables the company to avoid the so-called cyclic crisis periods and also to gain know-how and reliability in all the many applications of its products.

Nuova Protex is also certified by the





Transport Ministries of Europe and of the United States for the approval of its glass for public vehicles and transport, which is one of the sectors where the company has always been present. This means that vehicles with glass tempered by Nuova Protex can also be exported to the United States and Canada.

Export, growth and improvements

The activities of the company began to concentrate more on the international market in 1987, about 10 years after its founding, with a constant increase in exports that reached 60 per cent in 2006. The main market for Nuova Protex is Europe, but the company also has clients worldwide, including countries such as South America and South Africa.

The reason behind this growth is, above all, to be seen in the continuous Research & Development has undertaken in technology in order to reach the highest quality standards requested by the market. It is for this reason that Nuova Protex was the first glassworks in Italy to obtain UNI EN 29003 certification in 1993, and confirmed in 2007 by UNI EN ISO 9001/2000 with regards to the new norms in force in Europe in 2007.

This continuous research to improve its products has, however, obliged Nuova Protex to update and adapt its plants and procedures and, therefore, to shares these commitments also with its suppliers, choosing only those that have demonstrated to be able to satisfy its

needs, keeping pace with the market.

The company has always tried to combine the flexibility of a medium sized company with the linearity of process of a large industry, guaranteeing its clients reliability with regards to timing and quality standards.

Production

Nuova Protex has about 60 employees in two different production units, including the technical departments, administration, offices and workshop. Most of the machinery used in production are

completely automatic and are NC controlled.

To obtain curved tempered glass, it is important to programme and construct machines that are suitable for these processes. The planning is carried out in-house each product at a time. In fact, Nuova Protex works exclusively on order (90 to 99 per cent), according to specific designs from its

E8 CNH PLUS - TECHNICAL CHARACTERISTICS

External dimensions	6m x 4 m x 2.5 m
Weight	12.000 kg
Maximum interaxes	2500 x 1200 (indicative)
Minimum interaxes	0 (since the machine allows the second hole to be carried out 0.1 mm from the first)
Maximum diameter	50 mm
Minimum thickness	3 mm
Maximum thickness	19 mm
Spindle speed	0-6000
Voltage	380 Volt/50 Hz
Installed power	8 Kw

clients. According to the form of glass to be obtained, the moulds are planned and built and the curving plant, which can be simple (cylindrical), to very complex, with more curves in series.

Nuova Protex, therefore, starts from standard equipment and for each product develops new solutions and adapts its curving process to obtain the needed result.

When these shapes become more complex, such as multiple curves or multi-directional and spherical curves, the equipment also becomes complex and often the realization of the item becomes a real challenge that highlights the capability and experience of Nuova Protex's technicians.

To obtain curved tempered glass, the curving takes place outside the furnace, which takes the glass to the correct temperature and makes it pliable and easy to shape. Right outside the furnace, the curving equipment works at high speed, then releasing the glass and submitting it to a high-speed cooling operation – tempering. The process must be very fast, about 10 seconds. The study and the realization of the curving system is, therefore, very important and is the result of experience



gained only with years of work in the sector.

Nuova Protex has always continued to modify and extend the limits to the shapes of this process and there are always new shapes and curves to be satisfied. In fact, the needs of the market are in continuous evolution and demands are always more challenging.

Glass undergoes more and more processes and more and more is requested from glass. For example, in agricultural machinery, there are no longer small windows in a metal structure in the operator cabin, these have been replaced by glass, which has become a structure in itself creating the operator compartment. Size of glass sheets is also continuously changing and increasing.

With six tempering furnaces up and running and other to be started up before the end of this year, and a series of grinding, finishing, drilling, washing, lines with automatic loading and unloading equipment, Nuova Protex is, however, able to satisfy this increasing number of different requests as per size, thickness and shape.

TEVU 5 PLUS RR - TECHNICAL CHARACTERISTICS

External dimensions	6m x 3 m x 4 m
Weight	10.300 kg
Maximum interaxes	2000 x 1200 (indicative)
Minimum interaxes	0 (since the machine allows the second hole to be carried out 0.1 mm from the first)
Maximum diameter	50 mm
Minimum thickness	3 mm
Maximum thickness	19 mm
Spindle speed	0-6000
Voltage	380 Volt/50 Hz
Installed power	8 Kw



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