

COOPERATION with added value.

Thanks to the cooperation between Bonesi Pneumatik and Comes it has been possible to develop special actuators for the automation of machines for the production of ophthalmic lens and hard materials: from quartz glass up to crystal, plastics and polycarbonates.

GABRIELE PELOSO



Comes is one of the major supplier in the world of machines for the production of ophthalmic lens and surfaces of hard materials. Since its constitution, such Lombard Company offers to its Customers a complete range of machines, accessories, toolings, knowhow, spares and technical assistance to make such productions.

At Comes the way to deal within the economical crisis, since time present in our Country, goes through the export and the innovation, without forgetting the domestic market, that in this period seems to be growing. Therefore the Company not only develops new machines, but also new components and new production processes. They get profit from the technical cooperation offered by the net of various manufacturing Companies present in the area, like, as example, Bonesi Pneumatik for some automatism of the production system.

Customization of machines.

"The needs of the Customers are our priorities- says Mr. Alessandro Marabese, responsible for the production in Comes-, the customization or the realization of special machines made on request is our job.

Our purpose is the continuous improvement and optimization of the machines and of the production processes. The precision of the mechanical realizations is our objective in the manufacturing of the machines in the optical field". To reach such objectives Comes takes advantage of a technical office using CAD stations equipped with 3D software of the American PTC, for the mechanical designs. The production of the most significant parts of the machines is made internally by the use of three and five axes milling machines and CNC lathe. The carpentry and the electrical parts are, on the contrary, supplied by qualified suppliers. Another important fact is the realization of some special components for the automation of the machines produced by Comes, in particular for the machines Easy RX. The main part of such production systems is the mechanism of approach to the toolings of the lens to be machined. for the production of lens.

Experience and reliability.



Bonesi Pneumatik is an actual Brand, but its origin is far in the years being it established at the drawing of the Pneumatics in Italy.

During 2015 it is started the relaunch of the Company with the increase of its headquarter up to the actual indoor 4.000 sq meters, the enforce of the technical, commercial and production staff, the start of the procedures for the ISO 9001:2015 certification and the restyling of the most significant products. The production unit includes 25 CNC, some of them are subservient by anthropomorphous robots for a higher production capacity, also in three shifts not oversee. The Company includes also an advanced plant for epoxy paintings and various tools for the washing and the finishing of the machined pieces. The objective is to increase its presence either in the domestic and in the international market and to develop innovative products. About the standard range the Company offers a complete range of directional valves and cylinders, a tested series of pneumo-hydraulic units, FRL groups and it is implementing the strategy of the special product, also in presence of limited quantities.



The production of the Easy RX machines of Comes is around a couple of lens every 3-4 minutes. Moreover, Comes proposes to its Customers for the production of progressive lens, other kind of machines that need the control of the production by specific software developed by Comes. It is a real CAM for the production of lens. The LMS software is of easy and quick use and allows the process of surfacing of the lens. That means that also in this field the automation is part of the innovation. The reduction of the time to market and creative combinations in productions determine for a

company the success or the exclusion from the market. In addition, is important to mention that the machines of Comes are sold all over the world: in the European Countries, in the North and South America, Africa and Asia.

Pneumatics for the lens.

In order to reach the optimization of the production, as said, Comes cooperates with Bonesi Pneumatik in order to realize pneumatic cylinders for the production of the lens. " It is a basic component of the machine- says Mr. David Bocchio, technician of Comes- It is a pneumatic cylinder



The sanding and polishing system Easy RX in the Comes working area.



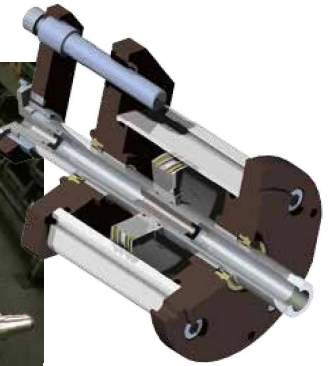
studied and developed by Bonesi Pneumatik according to our specific needs. The technical departments of Comes and Bonesi Pneumatik have together approached the problem and in few weeks they have realized the final product. It is an integrated solution that includes the pneumatic part and the real complex mechanical part. The system is supplied by Bonesi Pneumatik, ready for the assembling on the Easy RX machine". Up to now more than sixty components have been produced for the Comes machines. The cylinders in question include components with very strict machining tolerances. This is necessary in order to have very precision positioning. Furthermore, they have an external strong device for the non rotation of the piston rod. This is necessary because the lens are positioned at the end of the piston rod ; for this reason the position of the piston rod, when extended, must be rigid in order to tolerate the radial pushes of the rotation of the mechanism in which the lens is positioned.

The product supplied by Bonesi Pneumatik is an integrated solution including the pneumatic and the mechanical parts both.

A special actuator.

Every Easy RX machine includes two special cylinders of Bonesi Pneumatik with the same technical and operating characteristics. The Company located in Legnano since time have implemented the objective of the "customized" products. In this case, thanks to the competence and the professionalism of its sales engineer Mr. Fabrizio Ghirardi, able to catch and to understand the needs of the Customer and thanks also to its technical department able to develop appropriate products it has been possible to realize in short time such cylinders for Comes. The cylinders have been totally developed by Bonesi Pneumatik in co-engineering with the technicians of Comes.

Also thanks to the use of CAD 3D Solid Edge of Siemens PLM Software it has been possible to realize a cylinder with high performances: increased sliding of the piston rod; higher rigidity improved resistance to radial pushes; functioning at low pressure, for safety reasons; in general, improvement of energy saving. Furthermore, it has been developed a guiding system of the piston rod particularly precise and strong thanks to the increased length of the bushings; the piston rod has a throughout hole for the compressed air; the seals are in low friction polyurethane; the piston rod is equipped with a guide in Ptfе to increase the sliding and the precision of the movement. At last, it is used a special grease for lubrication at high performances and long life.



Double acting compact cylinder realized by Bonesi Pneumatik for Comes.

Let's say.

The advantages for Comes for the supply of such special cylinders is not for technical reasons only but also economical. "The handling of the production of the cylinder group- says Mr. Marabese- it is no more our task. The production process is demanded to the external supplier. Our job is just the 'plug&play' of the component on the machine".

What established between Comes and Bonesi Pneumatik it is an example of co-operation between Companies. The harmony of ideas make big results. It could be a model and create a net of homogenous Companies of single industrial branches.

A reaction to the market difficulties can be found in the fragmented productive structures, that are typical in the Italian situation. That means: the productive market based on the knowledge and the exchange of information will be the base of the new industry. Bonesi Pneumatik have taken such way.

