Monticello d’Alba (CN), Italy - These days, as you enter any supermarket, you will discover that the word chocolate identifies a whole variety of very different products, in terms of composition, dimension, packaging… even though they are often made by the same company.

To be able to compete in the current market, meaning highly demanding consumers, chocolate manufacturers need to know how to differentiate their offer, also in respect to cutting costs. Consequently, all these requirements affect the companies that specialize in manufacturing machines dedicated to the creation of this delicious food, capable of making anyone feel a little bit better even on their worst days. For this reason, Opm, one of the major international manufacturers of machines aimed at the production and packaging of chocolate, needed to control its lines rapidly and simply.

A similar task is traditionally assigned to the direct control of the staff who, by visual observation or using a series of instruments laid out along the entire production line, can check that all values are exact. All this without forgetting that, since they are dealing with food, the proximity of operators may ‘contaminate’ the chocolate, as some hair or even germs might fall in it from their clothes or shoes.

This is why OPM decided to add to its production lines, worldwide appreciated and exported, the possibility to control the production processes through one PC, safely distant from the production line itself. This allows the operator to constantly monitor the entire process without having to move, using the benefits of a set of alarms specifically designed to signal any deviations from the values set. Furthermore, this solution also allows the operator to visualise constantly and in real time all the activities, in order to proactively intervene in the event of an alarm.

This is because in many cases the need for maintenance work or some external causes may vary the parameters progressively and without our knowing. However, the constant comparison of the values read with those recorded in the history file makes it possible to prevent and plan specific interventions, thus avoiding sudden interruptions in the manufacturing process or eventual situations which may have a negative effect on the quality of the product being processed.

“Thanks to InTouch by Wonderware, we managed to concentrate all the controls in one spot, with a considerable benefit in operational terms”.

Aldo Abluton, Electronic Department Manager, OPM Group

Company Overview
OPM Group - Monticello d’Alba (CN), Italy
The OPM Group designs, manufactures and supplies machines and complete equipment for the following sectors:
• chocolate and candy
• baked goods and biscuits
• dairy products and frozen foods
• pharmaceuticals and cosmetics.
The OPM Group can supply turnkey installations based on a team of companies, each specialised in its own specific sector:
- OPM Chocolate: storage, distribution and chocolate moulding
- FIMA: multi-style wrapping machines for pralines
- JOINTECH: flow-pack machines, feeders and aligners
- OPM packaging: secondary packaging (boxing, crating), turnkey lines
- SAMAS: automatic palletising systems.
Currently the total surface area covered by the Group factories is over 23,000 m2, with more than 260 employees.
Dipping a finger in the chocolate
Having the real-time control of the entire production process, with the possibility to intervene and modify the parameters without even having to move from the workstation nowadays represents a competitive feature of great importance.

In order to achieve such a goal, it was necessary to devise an architecture specifically suited to answer these needs, relying on a company that specialises in the field of automation and production line control. The managers of OPM thus opted for a System Integrator such as B&B Automation applying InTouch HMI (Human Machine Interface) software, version 9.5, by Wonderware. As the head of the engineering department of B&B Automation, Marco Bellini, explains: “This decision was made on the basis of the mutual collaboration which was developed over the years between these two companies and of the request, often stated in the terms of contract, to use Wonderware solutions. But also because, although we tested other proposals, Wonderware allowed us to obtain especially gratifying results and the software solutions perfectly meet our requirements, with the added benefit represented by the opportunity to develop the code in a rapid and intuitive way. Without forgetting that, thanks to the characteristics of this platform, a cutting-edge solution was created, which meets all the control and management requirements of chocolate manufacturers”.

These software features make it possible to constantly monitor the entire production line, while meeting all the food traceability needs set forth by the current regulations and by the strategic decision to market ever innovative solutions, both for moulding chocolate itself and for the final packaging operations. “We made the decision of relying on such innovative electronics featuring particularly advanced functions” – explains Electronic Department Manager of OPM, Aldo Abluton, - “after a series of experiences which led us, in the past, to use control tools based on standard HMI systems which, although excellent, only allowed us to operate in certain areas of the plant. Instead, thanks to InTouch by Wonderware, we managed to concentrate all the controls in one spot, with a considerable benefit in operational terms”.

Furthermore, the possibility of remote control envisages the availability of adequate networks and protocols for such a delicate task. For this reason, the engineers decided to use a protocol such as Ethernet, which is gaining popularity in the industrial world, and to create a fibre optic infrastructure capable of operating easily even from a long distance. As a matter of fact, this type of line develops over several tens of metres, without forgetting that, to be used in the best possible way, the data must reach the factory servers.

This kind of connectivity, which is essential to make the most of the InTouch HMI software potentials, represents the infrastructure needed to guarantee the highest integration between the production and the management level, a task in which Wonderware currently boasts a worldwide leadership position.

Choosing this infrastructure and this control platform will also enable the rapid implementation of further features, according to the specific requirements of the final client. This is because the solution created by OPM and B&B Automation is totally open and guarantees the possibility for future development requested by the market.

What kind of chocolate do you prefer?
However, a perfectly controlled production line, able to guarantee a constant level of quality, is not enough to meet the production requirements of the current market.

Actually the marketing demands and the high competitiveness among individual manufacturers forces them to make the most of the production lines, cutting down the machine downtime and having the flexibility required to guarantee also highly differing productions.

Considering these requirements, OPM offers the market a series of solutions which meet the requirements of different production, thanks to the ability of optimising the control. This is also possible because the high productivity of OPM production lines allow the product formats to be changed several times a day. This characteristic allows reducing warehouse stocks while answering the market demands in real time. In the world of confectionery, where the final products’ preservation is often very expensive, just-in-time
production can be guaranteed. The record and recall of any recipe is made possible by a management system that uses a software platform, which also guarantees the possibility of rapidly varying the production, without needing long interventions nor specialised staff. “As easily understandable, the field of chocolate moulding always expressed this need, but recently also the packaging sector demands increasingly different packaging methods, in order to meet the specific needs of individual national markets” says Abluton.

To make this possible, the engineers had to invest in designing a high-level graphic interface using the InTouch platform which, through its user-friendly icons, permits to guide all the operations of the staff of the line without them requiring any specific training. With the further advantage that, while a recipe is being fulfilled, another one can be prepared off-line, and then launched at the appropriate time, without any loss in productivity.

Maintenance is sweet
The success of OPM lines, based on Wonderware technology and the skills of B&B Automation, is not tied only to the everyday management of the production line, but also to the attention paid to the maintenance operations. Indeed, it is this very maintenance work, which represents more and more often a discriminating factor in the production process. In fact, any maintenance operation requires the temporary suspension of the production, with repercussions on the company’s productivity.

The Wonderware platform is able to analyse the functioning parameters, comparing them with the activities detected on the field, and then supply a series of useful indications to plan such maintenance work. This feature allows the engineers to proactively operate, intervening before a fault occurs without interfering with the production. Mr. Abluton admits that “Obviously the implementation of these solutions raises the price of a machine. Though, if the customer calculates that, even just changing the format managed with InTouch, the amount of time required to modify the recipes can be cut down by 20-30%, it’s easy to calculate the economic return on such an investment”.

As nowadays, even the best chocolate manufacturer in the world wanting to stay competitive, can’t rely merely on the quality of his products but must also consider the most innovative automation solutions that enable the industries to improve quality and productivity at progressively lower prices.