

## MOTION CONTROL MACHINES – LAPAUW INTERNATIONAL

# Full speed ahead for innovation at Lapauw International

From prestigious hotels and cruise ships, to hospitals and rail companies, to textile factories: industrial washing machines from Lapauw are a firm fixture in laundries the world over. To maintain this reputation, the company is constantly innovating. The revolutionary Mediwave barrier washer is the perfect example of this. Its ground-breaking design features a powerful and reliable controller supplied by Siemens.

With the Mediwave, Lapauw – whose history dates back to 1933 – has once again confirmed its position as a front-runner in laundry technology. The world-class player from Heule in Belgium identified the growing demand for machines that meet the strict standards laid down by the cleanroom sector. Mediwave puts hygiene center stage: a housing made of glass reinforced polymer, a coating containing antibacterial paint (Titanium II Oxide) and Viton bearing seals.

Lapauw was a family business until several years ago. One of the consequences of the recent takeover by entrepreneur Philippe D'heygere was a renewed emphasis on innovation and an expansion of the R&D department. Mediwave is the first result of this new policy. The aim is for Lapauw to distance itself from the existing conservative laundry market. One outstanding feature of the Mediwave is its extremely intuitive programming and control system. This is all thanks to the brains of the machine: the Siemens SIMATIC S7-1200 PLC. The “Totally Integrated Automation” concept ensures that all components operate seamlessly with one another.

### Business challenges

- Various players were involved in the Mediwave project, which entailed a great deal of project management. A renowned design agency was put in charge of the look and feel. Lapauw and Siemens were responsible for the technical aspects. Everything had to be seamlessly coordinated with everything else.
- With the Mediwave, Lapauw plans to tap the growing demand for washing machines that meet strict cleanroom requirements and RABC standards.
- With its Total Cost of Ownership program, Lapauw works with off-the-shelf components. This means customers can choose where to buy spares and keep control of maintenance costs. To achieve this, Lapauw sought out partners who can supply parts and service anywhere in the world. With its global network, Siemens is the perfect partner for this.

### Technical challenges

- The drive mechanism of the drum must be able to withstand high speeds, yet also be compact enough to fit into the machine. So a way had to be found to achieve the same speeds and reliability with a smaller drive.
- Apart from hygiene, traceability is also a top priority: every item washed must be provided with a data report showing temperature, acidity, times and other data. This information is needed in order to trace the cause of any contamination.

## Solution

- Lapauw opted for the Siemens SIMATIC S7-1200 as a controller. With its high performance and compact design, this solution is ideal for Mediwave's modern design.
- The new PLC is also modular in design, with a whole host of communication facilities. This will make it easier for Lapauw to introduce future upgrades and innovations.
- In addition the SIMATIC S7-1200 is responsible for precise reporting of the wash program. This means customers can quickly retrieve information about acidity, temperature and times for every item washed.
- The SIMATIC Comfort Panel excels in user-friendliness and ergonomics. High resolution, deep colors and an intuitive interface guarantee a pleasant user experience and stimulate productivity.
- For the operating sequences Siemens and Lapauw worked closely with a renowned design agency which – separately from all the technical aspects – kept an eye on the user-friendliness of the equipment as a whole. In addition, it ensured that the machine is quick and easy to program for use.
- The Mediwave is fitted with a SINAMICS G120 C drive. This has to cope with a wide range of situations: from slow positioning of the machine, to spinning at three times the rated speed of the motor – for ten minutes at a time.
- Thanks to the Totally Integrated Automation concept the machine can also be included as an object in the library. This means the machine can quickly be reproduced for Lapauw in terms of the software, which has a positive impact on production costs.

## Result

- The Mediwave was an immediate success. Lots of them have now been installed, even in laundries which until recently only operated with competitor brands. In this way Lapauw is reinforcing its position as a front-runner in the laundry market.
- Thanks to standardization, efficient use of materials and stand-out technical features, Lapauw has succeeded in achieving significant cost savings in the manufacture of the machine.
- By joining forces with Siemens, Lapauw is automatically providing its end customers with a global service network and availability of spare parts, thereby ensuring extensive protection for their investment.

## Siemens' greatest strengths

- Customized total solutions: Siemens keeps a close eye on the (international) world of production machines and helps customers position and test their machine concept. In so doing, we take heed of the skills of the machine manufacturer and the specific requirements of the sector.
- 'Totally Integrated Automation': Siemens develops solutions for automating machine functionalities and for integrating them into the total production flow, one result of which is that operating costs are cut significantly.
- Extensive sector knowledge, experience in production technology and expertise in automation: three essential ingredients for machine manufacturing success that Siemens integrates with one another from beginning to end.
- Engineering support: we conduct full mechatronic studies and control the dimensioning of drives down to the smallest detail.
- Sharing experience: the experts at Siemens help machine manufacturers master specialist production and automation techniques. In addition their production is fully geared to each sector's quality and safety standards. This means they achieve profit through efficiency.
- Outstanding service: support for implementation, products and systems any time, any place.
- Wide experience in the field of retrofit and redesign.

## Project overview

- Industry: Laundry machinery
- End customer: Lapauw International
- Region: Belgium – Heule
- Technology: Totally Integrated Automation
- Technologies: automation: SIMATIC S7-1200 plc  
drives: SINAMICS G120C

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