

case study

ACelli

AUTOMATED GUIDED VEHICLES

HIGH LOAD CAPACITY AGV
FOR MASTER ROLL HANDLING

n°02-21

AUTOMATED GUIDED VEHICLES

HIGH LOAD CAPACITY
AGV FOR MASTER
ROLL HANDLING



Berry Global Group Inc., headquartered in Evansville, Indiana, is a Fortune 500 company and a leading global supplier of a broad range of innovative rigid, flexible, and nonwoven products used every day within consumer and industrial end markets. Committed to its mission, “Always Advancing to Protect What’s Important”, Berry Global proudly partners with its customers to provide them value-added protective solutions that are increasingly

light-weighted and easier to recycle or reuse. The company serves a wide range of markets with its solutions, including the beverage, construction, filtration, food, healthcare, household, and hygiene sectors.

- N° of Employees: 47.000+
- N° of Facilities: Over 290 across the globe
- Industrial Sector: Packaging & protection solutions

case study n°02-21

1 THE CUSTOMER'S NEED

The customer's objective was clear: to have the possibility of exchanging the Master rolls between the rewinders of the different lines of equal format present in its Statesville, North Carolina, manufacturing facility. This with a view to assuring both the maximum degree of efficiency and

safety for typically critical productions and an increase in productivity, due to the elimination of variables introduced by manual guidance and the lower waste ensured by automatic management. Fortunately, we had just the right solution for them in our product portfolio.

2 THE SOLUTION

The product that responded most effectively to customer requests was the A.Celli R-WAY® AGV TVC B, an automatic guided vehicle designed for any type of handling required in a transformation plant. This AGV is equipped with a magnetic induction guide, thanks to which it is possible to ensure:

- High precision positioning
- No problems with reflections or dust
- Possibility of working both indoors and outdoors
- Ability to manage the space outside the track route by means of a joystick

As for the AGV operation process, the operator, by using panel and HMI, can call up the vehicle and start the mission to be carried out through communication

between the PC server and the WI-FI - Ethernet network. Furthermore, the vehicle is also capable of generating missions automatically. Moving on to the technical aspects, the AGV has a maximum capacity of 20 tons and an autonomy of about 10 hours, which can be increased with a suitable sizing of the battery, thus customizing the solution according to the customer's needs.

Furthermore, the AGV TVC B operates in a controlled manner, with regular and constant accelerations and decelerations, and is equipped with sophisticated and reliable active and passive safety systems thanks to which it is possible to continuously monitor all the surrounding space.



AUTOMATED GUIDED VEHICLES

HIGH LOAD CAPACITY
AGV FOR MASTER
ROLL HANDLING

ACelli



case study n°02-21

3 THE RESULTS

Unlike traditional technology, which provided for movement by rail with fixed track routes, the use of AGVs gave the company the possibility both to optimally use the space available in the plant and to perform maneuvers such as the rotation of the Master roll, previously carried out by means of appropriate systems. Furthermore, among the strengths of the solution provided and the AGVs in general, we can mention:

- Greater flexibility than fixed automation systems
- Increase in productivity
- Increased inventory efficiency and accuracy, in the event that the AGVs are

connected to a control or warehouse management system

Thanks to the AGV it was therefore possible to meet the customer's needs, that is to take charge of the Master rolls, transport them to the selected rewinders within the factory and return the empty shafts at the end of the rewinding cycle to the respective Master roll rewinders. In addition, everything is tracked with the help of RFID systems and data tracking, thus allowing the company to know, at any time and in an unambiguous and automatic way, on which rewinder a specific Master roll is located and where the empty shaft must be returned once the process is finished.

20 t

Max. vehicle load

10 h

Vehicle autonomy

75 m/min.

Cruising speed

4 THE CLIENT'S STATEMENT

“The project objective was to remove production bottlenecks and improve the plant's output. A.Celli was chosen as a supplier because of a proven track record of delivering on automation projects and the seamless integration of the automation to the existing Nonwovens operations.”

*Robert Dale
Vice President,
Capital Engineering
HH&S Berry
Plastics Corporation*



ASK FOR A FREE **CONSULTATION**