

## Flexible Pipe Sorting and Palletizing

### THE CHALLENGE

A leading stormwater management manufacturer needed assistance in optimizing the strapping and palletizing of 10-foot-long sticks of plastic pipe, which are extruded 24 hours a day, 7 days a week. Due to labor shortages, the company was unable to keep up with packaging and palletizing, causing piece loss and quality issues. Even during uptime, the pipe's flexibility and length presented several safety and ergonomic challenges for employees.

### OUTCOMES AND BENEFITS

By implementing this innovative automation, JR Automation and the customer were able to collaborate to increase their throughput for several different diameters of piping. Additionally, JR Automation was able to significantly minimize the manual handling of the part by the customer, minimizing ergonomic and safety concerns. The system also is pre-configured to allow the customer to efficiently mix and match pipe types into 2-, 3-, 5- and 7-packs before palletizing, all without downtime for adjustments.



Above: Robotic stacking of pipe bundles onto pallet or crate for maximized capacity

### FAST FACTS

#### Industry:

Consumer Products, Logistics, Packaging

#### Technology Capabilities:

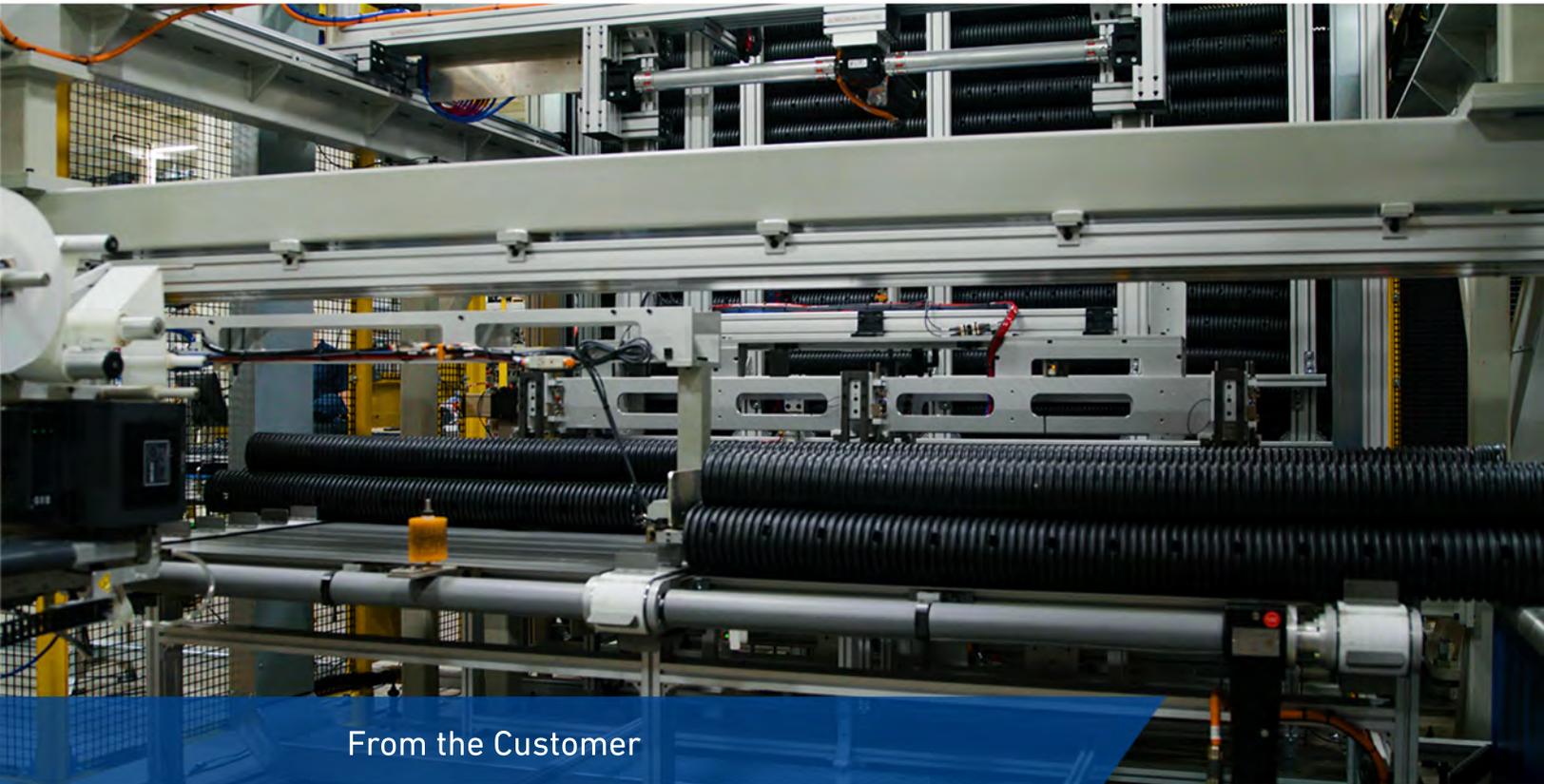
Conveyance, Material Handling, Palletizing, Pick and Place, Robotics, Strapping

**Cycle Time:** 14 seconds

**Crate Fill:** Approximately 30 minutes

## SOLUTION

Working side by side with the customer, JR Automation designed a creative solution to these challenges. The extruded pipe sticks are fed onto a conveyor system that leads to a custom-built hopper station, that holds a second style of pipe. From there, a part stacking machine pulls the required numbers of each pipe type together into 2-, 3-, 5-, or 7-piece stacks. Each stack is then pushed through an auto strapping system that lashes together the set, in multiple locations. If necessary, a flipper cell can rotate the pack over for optimal stacking. Finally, a FANUC robot picks the pipe stack and places it onto a pallet or crate, optimizing the placement of each for maximum capacity.



### From the Customer

*"JR Automation is helping us understand there are a lot more opportunities for automation in our process than what we initially thought. We have some significant growth goals that we want to achieve over the next few years.*

*Partnering with someone like JR Automation I think is really going to help us achieve them...Having automation processes makes it so much easier to train, reduces risks continuously and makes it a great place to work."*



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