

# Picking Up The Pace of Production With Customized Timers

*Application-specific digital timing systems help manufacturers increase the speed of production by establishing the tempo and allowing workers to monitor progress against it*

When it comes to production and assembly lines, every second counts, and finding a way to squeeze more out of existing resources often requires more than exhortations from management. For some companies, it means putting the employee “on the clock.”

For many companies the pace of production falls into a natural rhythm or tempo, often dictated by the earnestness of the workers and, to a lesser degree, the complexity of the work.

However, the established, natural pace of production can quickly become an ongoing problem if workers at stations become bottlenecks or slow others down the line. This can be particularly exasperating if management perceives that the work could have been completed faster with a little more focus and effort at various points along the line.

Even if there are no obvious bottlenecks or slows and overall production speed is considered “adequate,” the question then becomes: what cost-saving and other ancillary benefits could be achieved if production could be dialed up by 25% or more, for example, without adding more workstations or personnel? In other words, would there be a benefit to picking up the pace?

One way to optimize the flow of products and increase overall production pacing, while also providing a convenient form of reference for both employees and management to consult, are digital timing systems, or Takt timers.

The term Takt is based off the German word “Taktzeit,” which roughly translates to “keeping a beat.” The concept behind these particular timing systems is to set an easily comprehensible and digestible form of pacing that can help a manufacturer increase production.

Digital timing systems are typically comprised of various components: LED displays that provide key information to workers such as target pace, actual pace, deviation, efficiency rates, and count downs/ups, auditory indicators, sensors and even background software and keypads to establish the settings.

Because each manufacturer has a unique production process, as well as different needs related to production, these are not “off-the-shelf” systems. Instead, timing systems are often built to meet the specific needs of each application. As a result, Takt timing systems must ideally be extremely accurate, easily programmable, and adaptable to a wide range of activities.

DG Electric, an electrical contracting firm for industrial facilities based in Kansas City, MO., installed a digital timing and counting system developed by Alzatex Inc. at the request of a new company executive that wanted to establish a higher pace of production for the remanufacturing of train brakes. The executive had successfully increased production in other companies using timers.

At the time, Donovan Ginnings, the owner and operator of DG Electric, admittedly knew little about Takt timing systems. He considered creating a system from component parts, but quickly realized the amount of time would be prohibitive and the final product less sophisticated. So he conducted some research and discovered Alzatex, a company that specializes in creating highly customized and programmable timers, counters and displays for industrial customers.

For this project DG Electric had clear and specific requirements from the customer regarding what it wanted for its production line. They wanted a system that would display an easily adjustable timing goal that both management and employees could consult. The system also needed auditory cues (a bell), visual displays, a count-back-down timer, the ability to recognize break and lunch times and the ability to list specific start and stop times. Because there were multiple workstations in the client's facility, the timing system needed to be one that could be viewed (or heard) by operators on the floor while they were working.

According to Ginning, the customer's goal with the timing system was to give operators an easily understandable pace of production they could follow. If product demand slowed or increased, management at the firm could adjust the timing accordingly.

Alzatex was able to deliver a system that met all the requirements and the "customer is quite pleased," says Ginning.

Norm Van Vactor, formally the general manager of Leader Creek Fisheries in Naknek, AK, from 2008-2012, fully understands the benefits of utilizing a timing and counting system in a production facility.

During his time with Leader Creek Fisheries, the company was undergoing an important transition: the company originally specialized in heading and gutting salmon, but the company was aiming to refocus on producing filets—a product that Van Vactor notes "takes a lot more labor and a lot more skill."

Furthermore, there are also several logistical challenges that are inherently unique to that particular industry: there's very little ramp-up time, the product is time-sensitive and a large number of the employees are seasonal. Therefore, Leader Creek Fisheries required a system that could help them establish an efficient production rate to handle a large volume of product in the shortest possible period of time.

In addition, Leader needed a system that could quickly showcase to new employees the preferred processing rate and general time goals. After all, training time was limited as many of the employees arrive for seasonal work and are only on site for six weeks or so before the season ends.

Alzatex was called upon to create a timing system that would meet all these needs. The final system utilized an integrated and custom counting and timing set-up that was designed to accurately count the total number of units moving through the production system, as well track the production rate and establish overall timing goals.

Van Vactor could set the production rate and goals per processing line, and both timing and rate goals would appear on displays on the production floor. Operators could look at the monitors and discern their current rate, and also what their ideal rate should be over their respective shift period.

“They can also look at the monitor and see that their buddy five feet away is meeting his goal and meeting his standard,” says Van Vactor, adding that the system helped to promote friendly competition. “So there’s a visual reinforcement incentive as for what everyone is doing,” he says.

If someone was working too slowly – or very quickly – and causing a “log jam” further down the line, managers and operators could look at the system’s displays to identify adjustments that needed to be made.

If an employee was new, the system could be used to set incremental goals to help speed up progress while also maintaining quality. The timing system could be accessed digitally, so managers had immediate remote feedback regarding the real-time progress of each section of the production line.

The system allowed for incentives as well. If operators met their pacing goals or exceeded them on a shift or workday basis, the company would add additional time off, increased breaks and also add bonuses to the end of the work shift.

“So it really inspired a great deal of teamwork and it was never really construed as a management tool to just drive production,” says Van Vactor. “It was seen as a tool of efficiency and to make sure that everybody was doing their fair share and that it was all a team effort to make sure the plant ran well.”

Regarding results, Van Vactor notes that setting a steady pace helped to ramp up production. “I think without question that [the] product allowed us to do 20 to 25 percent more production a day,” he says.