

# Reducing Parts Handling Time

*From batching to inline stress relieving, and now to parts catching, counting, sorting and weighing*

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**H**ow do I reduce my parts handling time? The next step is closer and easier than you can imagine. The industry has embraced inline stress relieving to condense spring production time, but it still leaves the burden of additional handling after the parts exit the oven. Parts-catching machines are the next wave of spring and wireforming industry “must-haves” for faster turnaround time.

To some, this new system will seem frivolous and irrelevant to the status quo. To others, the immediate benefits are apparent: no more 100-percent sorts, the ability to run dark, faster counting and packaging time, saved operator time, lower production costs, automated work cells with machine shutoff, and a capital expense that pays for itself in less than a year’s time. Once all the benefits are put on the table, the next question is, “What should I look for in a parts catching, counting, sorting or weighing system?”

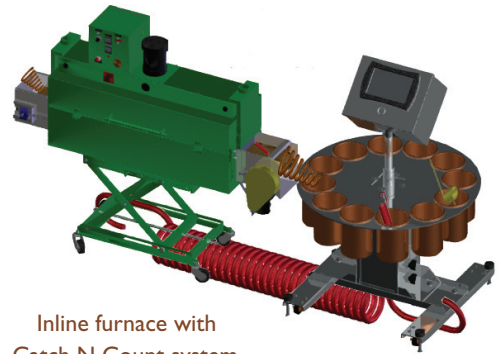
## Overview of Operation

A majority of parts catchers and handlers use a carousel or platter to rotate parts to the next empty container. Others use a rotating chute to disperse parts around a semicircle of various containers. The parts (springs, wire forms, etc.) are segregated into a number of different containers: buckets, baskets, (deli) cups, bins and boxes. Once a set number of parts is placed into its container by either count, time or weight, the carousel or rotating chute moves to the next empty container. The size of the part and container determine the duration a machine can run without an operator standing guard.

Your parts catcher should come equipped with the capability to interface with your coiling equipment and free length gauges to automate your production process.

## Operation Options

The parts catchers and counters should be able to collect their data, the count, from a variety of sources. Testing gauges located on the coilers or wire formers that have an output for count can pro-



Inline furnace with Catch N Count system.

vide the data. A read switch affixed to the cam shaft of the coiler (i.e. cut-off arm), or on any rotating part that turns once per cycle, can also process the count. The read switch is typically affixed with a magnet to the coiler. Any contact closure or signal mechanism coming from the coiler or test gauge can serve as the trigger for the count, as well. There are a number of ways to process the hard count for the parts and, depending on your situation, you might choose to use a number of them throughout your plant.

Another option is to run the parts catcher using a time-based trigger that ignores a hard count and relies solely on the basis that “X” parts should fill up “Y” containers in “Z” amount of time.

Whichever method you choose, your parts catcher should be able to run continuously so that an operator can empty the containers once they are filled and keep the production cycle going.

## Features to look for/must haves

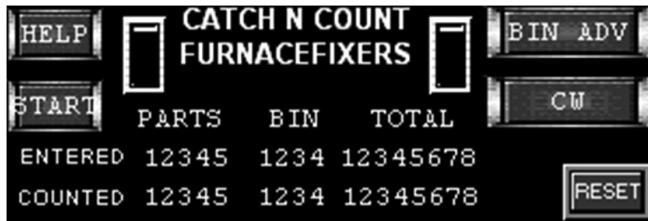
In order to make this shift in production worthwhile, the system needs to be straightforward. Ultimately, the work cell containing the count unit is only as efficient as its operator. Controllers that are unintelligible with tiny buttons and fancy engineering language only leave the operator with a headache. A decent-size display with easy-to-press buttons or a touch-panel system will ensure ease of operation. Your new system should have the capability to manage parts by bin count, overall count, continuous operation and time. There is not a universal container that will work with every part out there. Make sure to size your buckets, boxes or bins to suit your operation. Most parts counters and handlers have many different options available.



Catch N Count RC300.



Catch N Count 12-bucket platter.

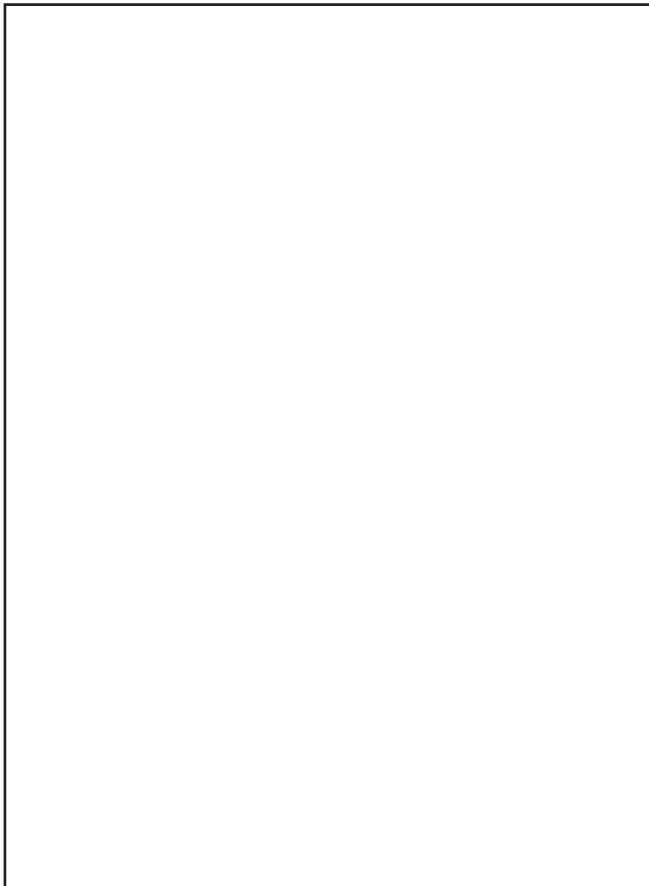


Touch panel screen shot – count.

Your parts catcher should be able to turn the coiler off after the job is done via a contact closure that accommodates either a “normally open” or “normally closed” contact. If you use a free-length gauge or equivalent, the parts catcher should be able to interface with the equipment. Usually, the gauges will have a reject function that will not count bad parts. The parts catcher should be able to synchronize with an output on the gauge and not count the rejected part. There should also be a temporary belt shutoff function, so parts will not drop while the carousel is turning and cause a mess on the floor. If you use a rotating chute to catch and distribute the parts, it must have a gate that closes while the chute rotates to the next box.

### Advantages

By incorporating a catching and counting system into your current production schedule, you will



Touch panel screen shot – time.

be able to eliminate 100-percent sorts. Have you ever scrapped 1,000, 10,000, even 100,000 parts because you realized too late in the game that they were out-of-tolerance? Using a parts-catching system with segregated containers will enable you to go to back bin by bin and locate the point at which the part got out of line. Instead of wasting countless parts, you will now be able to locate the trouble spots and make the necessary adjustments to keep your waste level down.

Running dark or with a light crew for production is now possible. Using a parts catcher in your work cell will help diminish a train wreck come Monday morning. Your catching-and-counting system should be able to help run your operation from start to finish. Once you have set the number of parts per bin and the total number of bins for your job into the machine, you can safely start up your process and watch, or not watch, it run till completion.

You will be able to save operator time, inspection time, counting time, weighing time and packaging time with a parts catcher. The operators will find it much easier to handle multiple machines in a given workday, and have additional time to help inspect and package their jobs.

### Conclusion

Parts counting-and-catching systems have created that extra edge needed to stay competitive. It was not too long ago that inline ovens went through the same breakthrough period, and now most companies could not survive without them. Parts catchers will prove themselves worthy with the money they save you. Not only will you be able to streamline your operation but you will also be able to reduce waste, speed up job time and run dark. It only takes a slight adjustment in how you currently run production to use parts catchers, and you will save yourself countless amounts of time, money and energy.

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