

# Surface<sup>®</sup> Standard Charge Cars

The Workhorse of Your Automated Batch Furnace Line



**You rely on your charge car to keep your furnaces fully utilized. Therefore, Surface continuously improves our best-in-class charge car to improve its robustness and reliability.**



## Recent Improvement Details:

- New structural tube frame design to further increase the charge car's renowned rigidity and reliability
- Additional access ports to allow easy maintenance of components
- Upgraded heavy-duty mounting plates for handler and lateral drive motors to enhance drivetrain dependability
- Increased handler frame hardness for improved wear resistance
- New, optimized cast chain guide to reduce internal friction and increase net torque transfer to the load
- Variable speed lateral drive adapts for optimal pacing through each step of the transfer process allowing quick, efficient load handling
- Patent pending AP<sup>™</sup> Torque system, part of the AP<sup>™</sup> Series of advanced predictive tools offered by Surface, monitors the condition of your furnace hearth and alerts when maintenance needs to occur (*available as an option*)

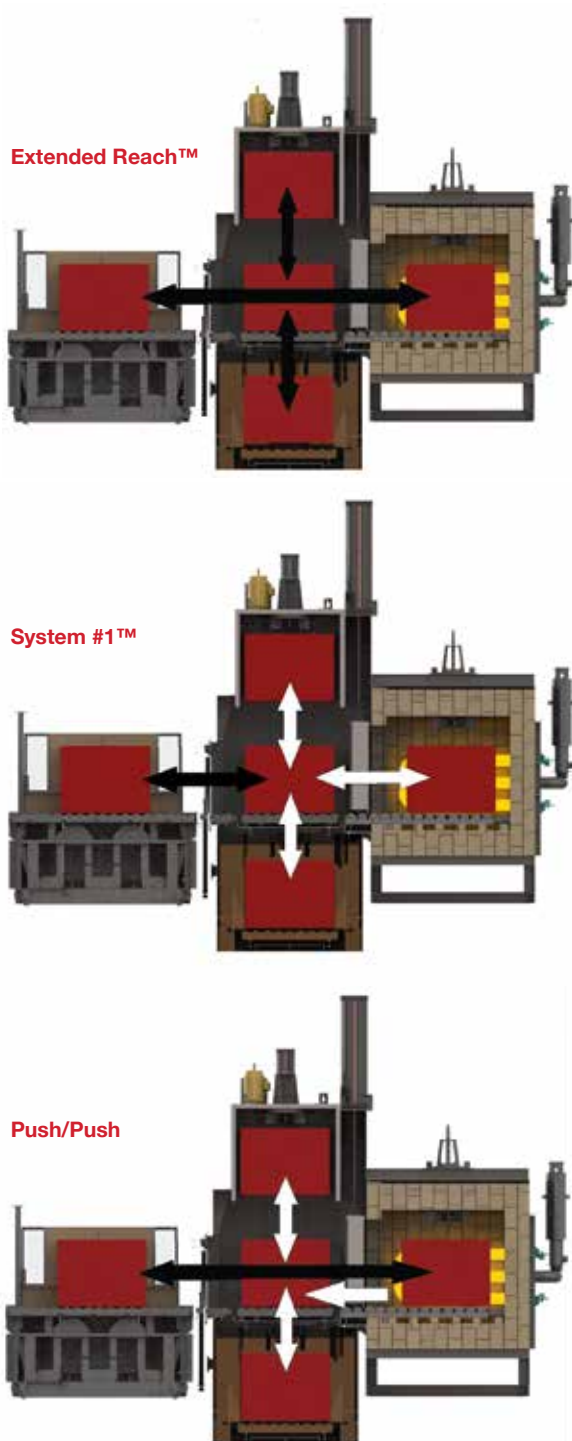
## Key Features:

- Rugged, reliable design
- Made to match your Allcase<sup>®</sup> line – Extended Reach<sup>™</sup>, System #1<sup>™</sup>, and Push/Push configurations available
- A weight rating that lasts the life of the car
- Put the brains with the brawn – fully automated systems available upon request

## Standard Charge Car Sizes:

<b>Width (in.)</b>	24"	30"	36"	36"
<b>Length (in.)</b>	36"	48"	48"	72"
<b>Gross Load Capacity (lbs.)</b>	1500	3000	4000	7000

\*Custom load dimensions and capacities available on request.



## Handling System Options:

### Extended Reach™

- Handler system on charge car or charge table moves the load into the vestibule, to/from the heating chamber and from the vestibule
- Elevator moves load to/from quench tank and optional top cool
- All motions are operator initiated

### System #1™

- Operator initiated handler system on charge car or charge table moves the load to/from the vestibule
- Automatic rear handler system moves the load to/from the heating chamber
- Automatic elevator moves load to/from quench tank and optional top cool







### Push/Push

- Standard operator initiated or optional automatic loading of charge vestibule and heating chamber with an Extended Reach charge car or charge table
- Automatic rear handler system moves the load from the heating chamber to the vestibule
- Automatic elevator moves load to/from quench tank and optional top cool
- Standard operator initiated or optional automatic unloading of charge vestibule
- Provides quickest quench transfer time – ideal for thin parts
- ShuttleTrac™ automated charge car can be paired with fully automatic handling system

## Get Started with Surface!

Call Surface with the following information to get your furnace solution underway.

Work Description and your Process needed:

-  cycle
-  operation
-  hours per year
-  available space
-  operating temperature range
-  heat source

We will work with you to develop the best processing solution for your heat treating requirements. This starts with developing a complete process solution and continues through shipment, installation and equipment commissioning.

Once your furnace is in place we continue working with you for the life of the equipment through our industry leading aftermarket services including customer service, Aftermarket Parts, Rebuild and Upgrade Service. We look forward to working with you.



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