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Automation Specialty Movements

Marty Powell - Technical Systems Specialist

419-276-5969

mpowell@carlisleft.com



DeVILBISS. Ransburg. ms. BGK. BINKS.

What Is A Specialty Movement?

Anything That You Can Do:

- ***On A Timed Basis***
- ***On A Programmed Sequence***
- ***Without Human Interface***
- ***A Movement – Index – Or Motion that is***
 - ***Faster Than Humans and Safer For Employees***
- ***A Movement That Can Increase Revenue***



Increase Revenue

**What is a Batch/Load/Rack-Cart Worth
How Much Revenue**

\$500 / 6 Load(1 shift) = \$3,000 x 5 days = \$15,000

\$500 / 8 Load(1 shift) = \$4,000 x 5 days = \$20,000

\$5,000 per week x 48 weeks = \$240,000

Weigh This against the Investment

Profit is Your Calculation – Profit is what you get to spend

Know What You Need To Do!!!



- *Product Types*
 - *Large – Small, Heavy or Light Weight*
- *Product Environment*
 - *Indoor – Out Door Exposure*
- *Type Of Coatings*
 - *Wet – Solvent or Waterbased*
 - *Powder Coating*
- *Budget – After you know the above*
 - *Are you an OEM - Job Shop - Custom Coater?*

Things to Know

How To Get What You Need

Many Of The Concepts Presented Are Available Through Exhibitors At EASTEC

Know What You Want

Know The Value It Adds To Your Company

Know What Your Company Is Capable Of

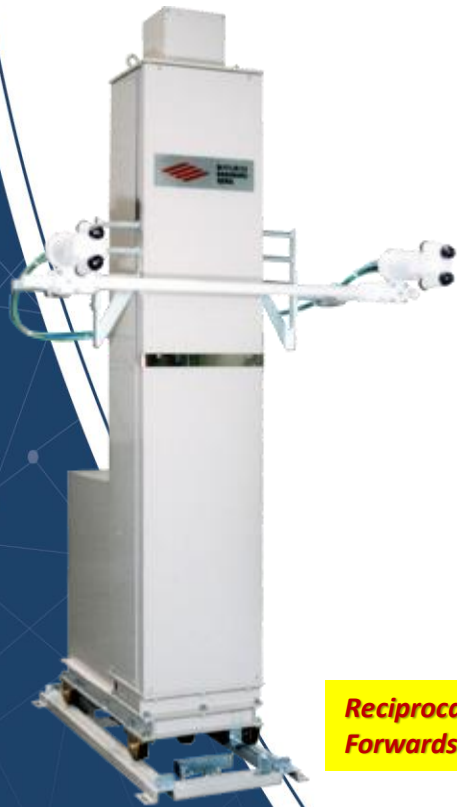
Automation In Product Cleaning



		Water	Tank	Counterflow	Temperature	Time (sec)	Filter	Operating pH
Stage 1	Alkaline Clean	City or RO	Tank 1		120 - 140F	90	100 micron	10 - 11.5
Stage 2	RO Rinse	RO	Tank 2		Ambient	30	100 micron	N/A
Stage 3	RO Rinse	RO	VIRGIN RO	to stage 2	Ambient	30		N/A
Stage 4	Pretreatment	RO	Tank 3		70 - 85F	60	25 micron	4.0 - 4.5
Stage 5	RO Rinse	RO	Tank 4		Ambient	30	25 micron	N/A
Stage 6	RO Rinse	RO	VIRGIN RO	to stage 5	Ambient	15		N/A

Reciprocators – Gun Movers

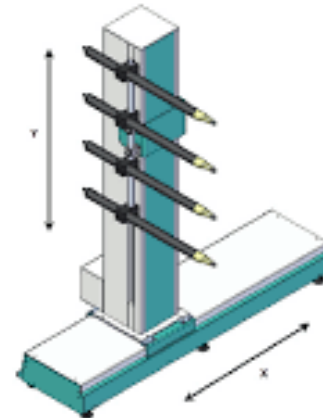
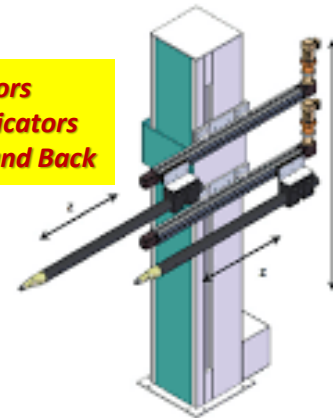
Hard to Find Employees? - Consistent – Safe – Less Physical Requirements



Reciprocators Move Forwards and Back



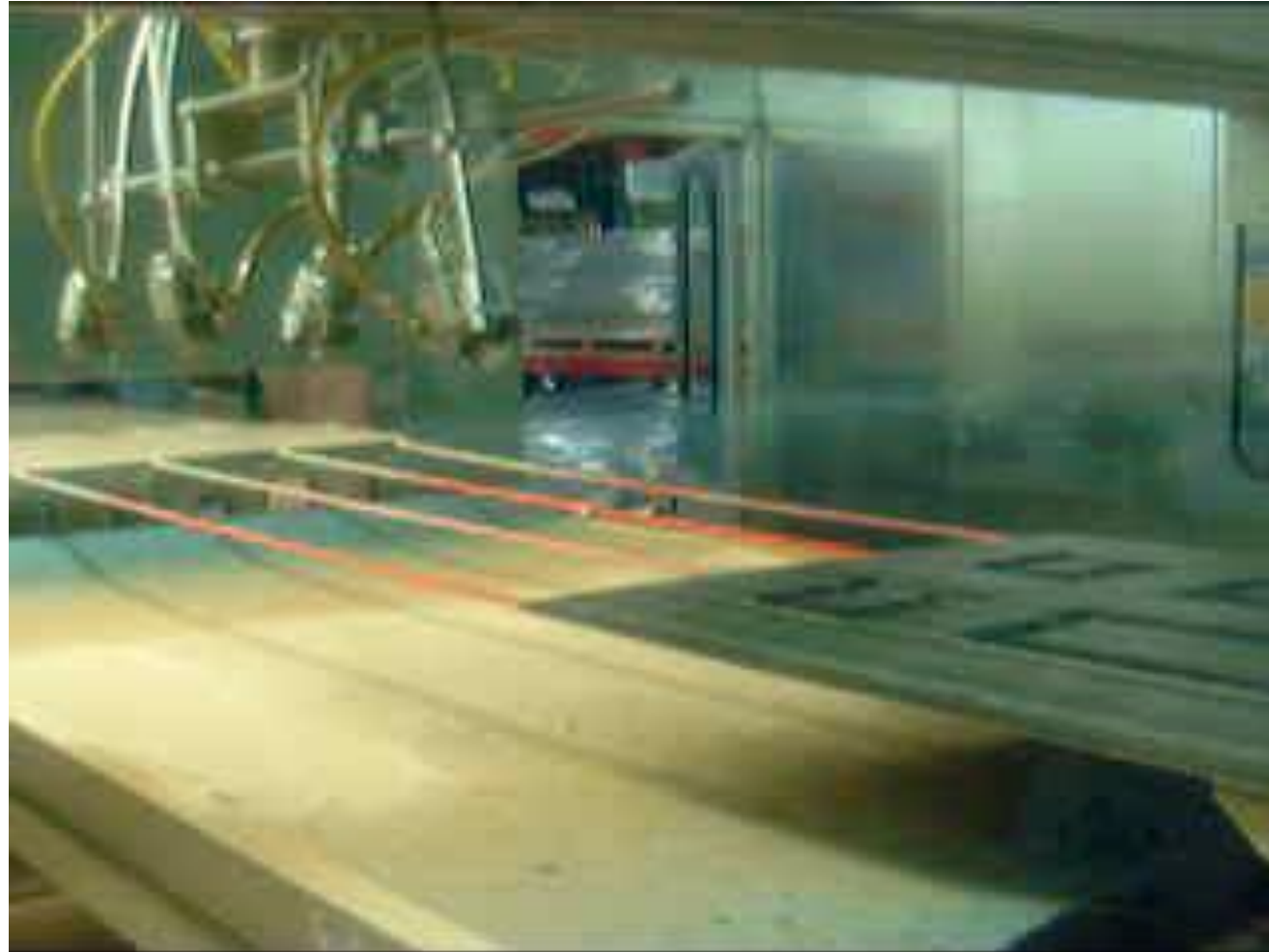
Reciprocators Move Applicators Forwards and Back



Repeatable Consistent Production and Quality

eastec®

Reciprocators



Video

Chain On Edge Conveyor Systems

NOT FOR JUST SMALL PARTS

Allow for Easier Automatic Load and Unload of Products – Pick and Place

Compact and Floor Mounted Systems

Versatility in Variable Parts

- **Part Holders Easily Changed**
- **Many Be Rotated & Coated**
- **Stationary (Non-Rotation) Automatic Painting**

Parts Rotated in Infrared Ovens



Video

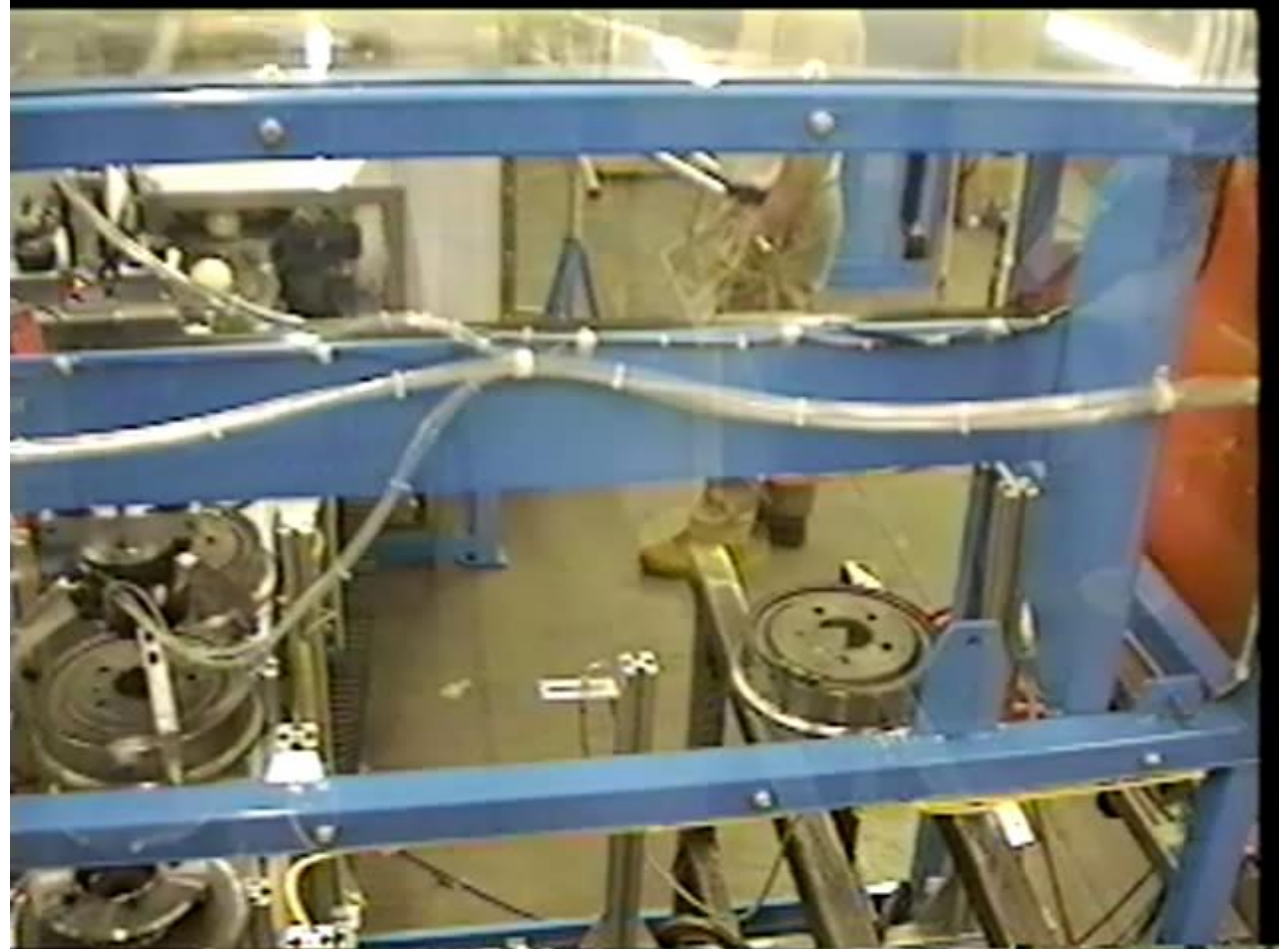
Chain On Edge – Pick & Place – Go Together

Pick & Place Provide Repetitive Movements

Save Employees from Monotonous Jobs and Body Stress

***Consistent Timing –
Fixtures Provide Masking
Perfect For High Production***

***Ability to Index in One Section While
Continuous Movement in Other Sections of
System***



Video

Automatic Powder and Paint Applicator

Paint or Powder

Specialized Movement on More Than One Product

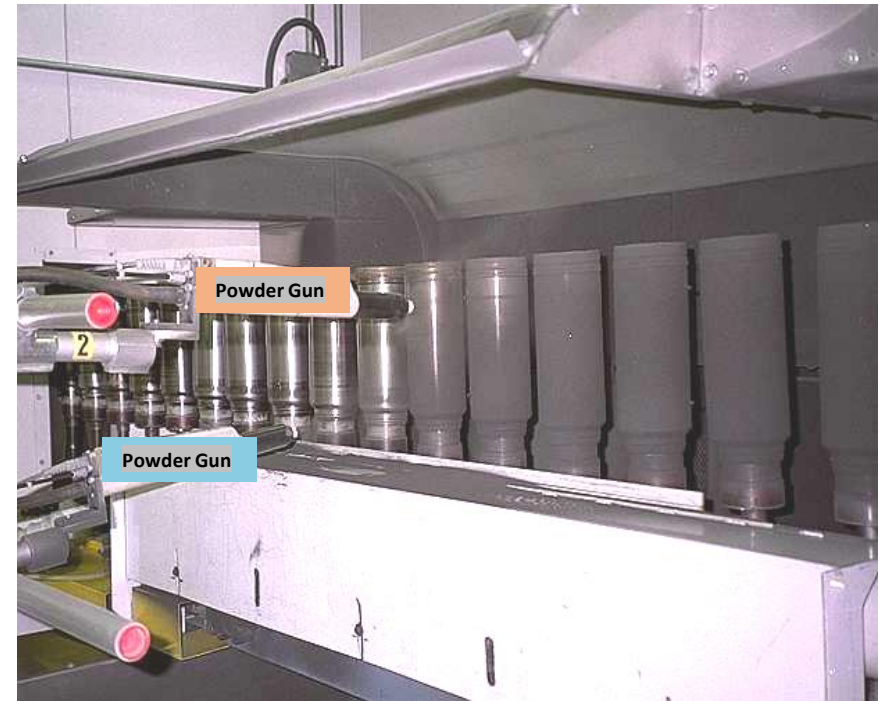
Consistent – Repeatable Applications

All On Timed Sequence

Video



HIGH PRODUCTION POWDER SYSTEMS



Powder Coating- Consistent – Repeatable Applications - All On Timed Sequence
Part Holders Kept Cleaner – Less Maintenance

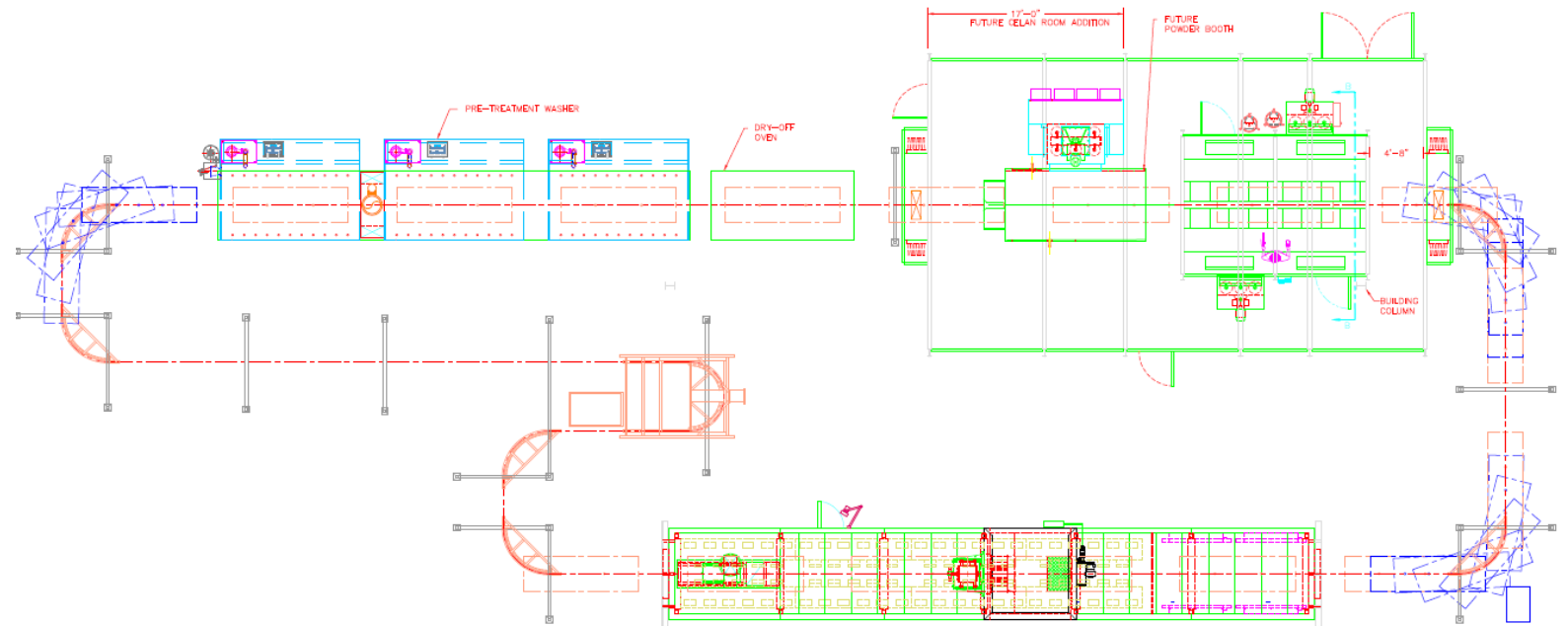
Indexing Lines – Many Configurations

*All Movement are Equal
in Distance*

*Keeps Operators on
Timed Movements*

*Allows a Movement Thru
a Process or Stopped in a
Process*

Usually Automatic Doors



You Can't Do Continuous – Batch Is TOO SLOW!

Indexing Lines – Timed Movement

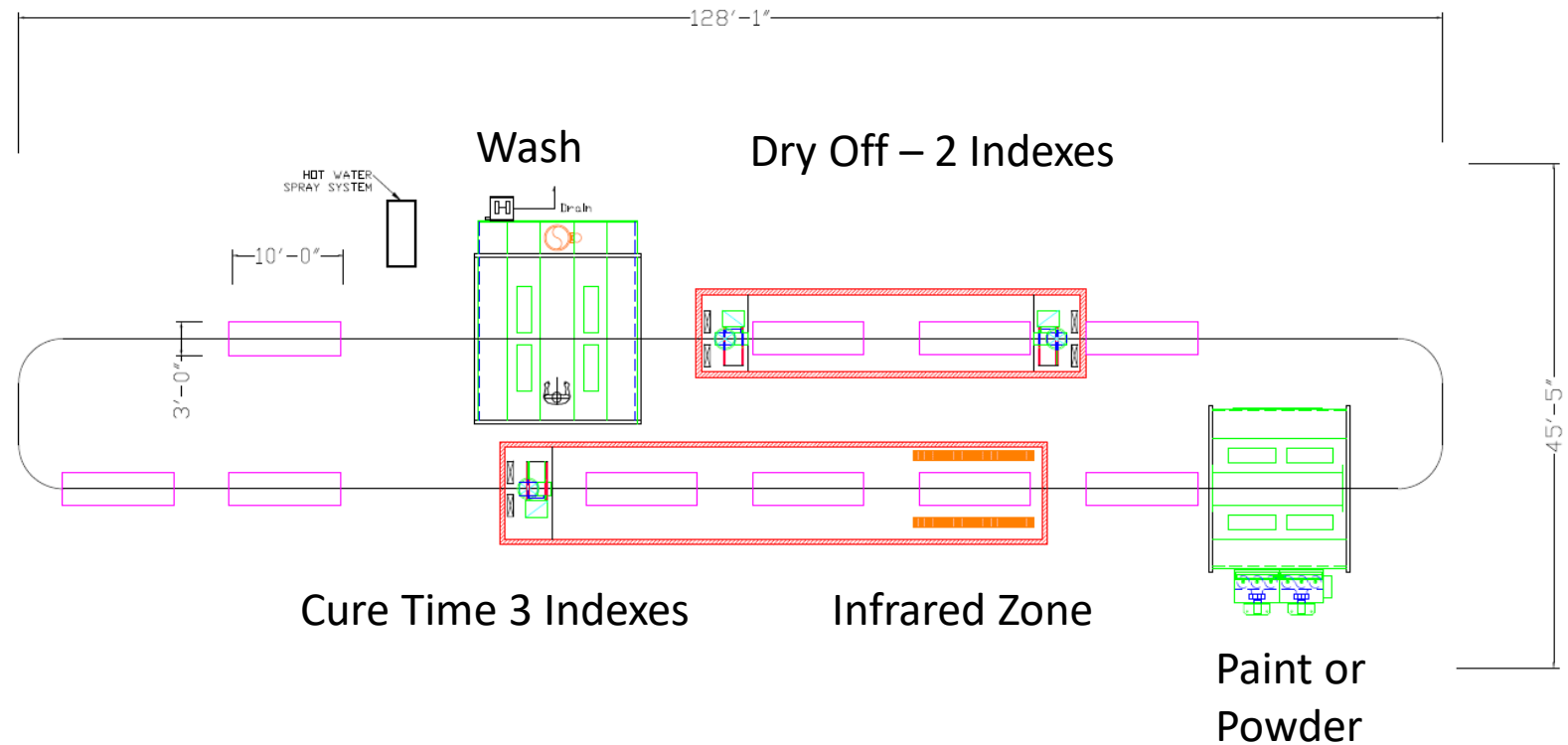
Racks Move on Timed Basis

Keeps Process On Time

Time Set by Longest Operation

Infrared Melts Powder as Rack Moves In To Oven

**Ovens -
Air Seals Also Work**



Other - Specialty Conveyors

Free Rolling Conveyors With Powered Pusher

Move Racks Thru Processes That - Are Better if Parts Are Moving

Powered Movement Only Where You Need It – Stopped When Needed

Less Expensive Than Power and Free – Better?

Powered Thru Oven Only

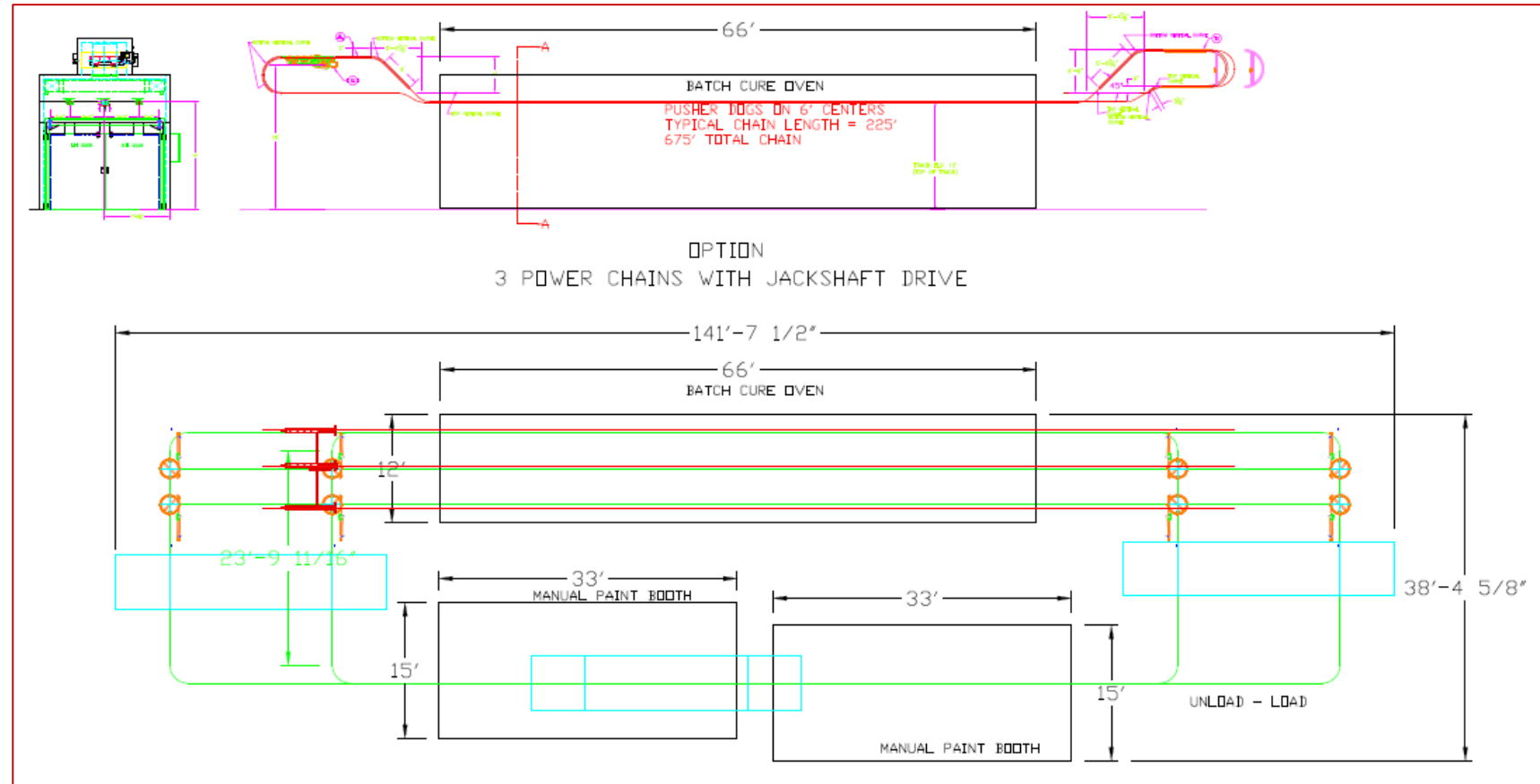
Three Rails System

Free Rolling in Paint Booths

Powered Thru Oven

Allows Maximum Loading Of Ovens

Excellent Timing



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Cart Loaded Ovens



Automation - Specialty Movements – Marty Powell, CarlisleFT

Automated Cart Loading / Unloading

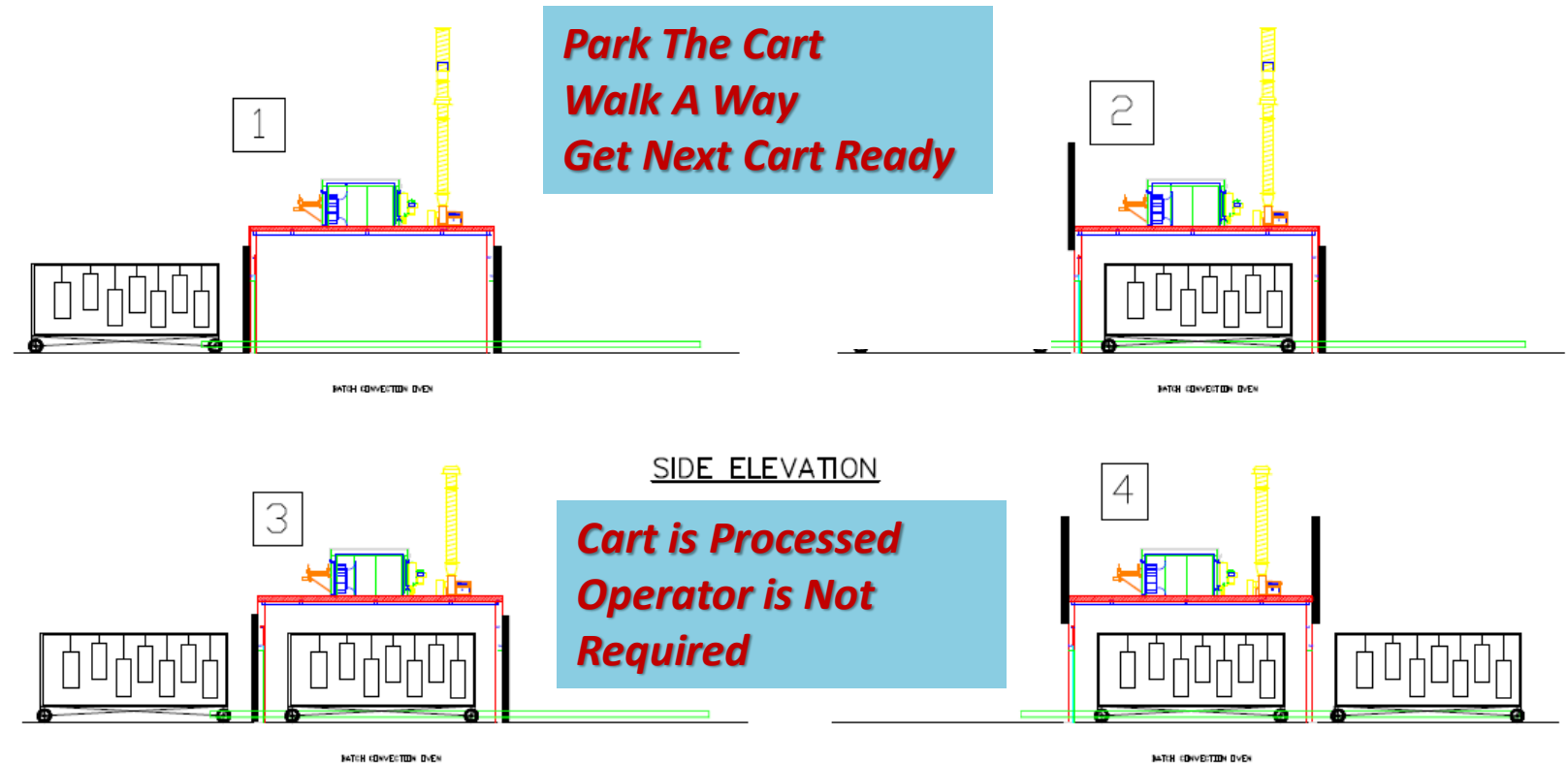
Do The Math

*Time Gained In Production
Added Production*

*Faster Loading
Personnel Stay Away*

- *Hot Area*
- *Hot Parts*

*Energy Saved As Oven
Loses Less Heat*



Auto Load Carts Is Not A New Idea



Automatic Swing Doors

Increase Production with Ontime Batches

Carts Move On Time – Every Time

Times Can Be Programed for Variables

Different Loads

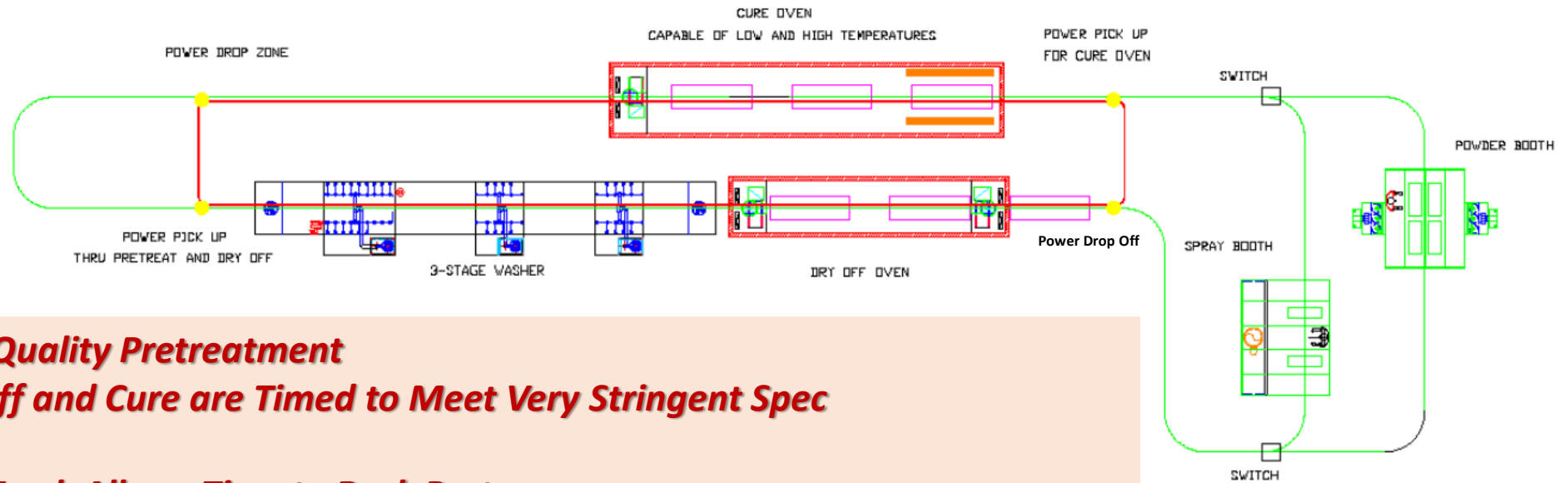
- ***Different Times & Temperatures***

***This Same Process Can Be Used On
Overhead Conveyors***

Push Pull – Pass Through Are More Efficient



Power Push Where Needed



***High Quality Pretreatment
Dry Off and Cure are Timed to Meet Very Stringent Spec***

***Free Track Allows Time to Rack Parts
Then Process Many Racks
Stop Racks for Masking – Time Consuming Paint or Powder Coat***

Why Is This Important – Time i\$ Money

**What is a Batch / Load / Rack-Cart / Extra Ft per Minute Worth
How Much Revenue
Per Rack or Batch
By Increasing Line Speed
By Improving Productivity**



On his way to the Bank

***What Is Your Time Worth?
KNOW - Your Cost of Production?
Calculate Your Savings.***

Increase Your Revenue with Specialty Movements



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