Rapid® Engineering LLC

Standard Econo-Series Finishing Systems

A typical RAPID® finishing system with five-stage washer, dry-off oven, cure oven, conveyor and controls.

You'll Value Our Experience!

www.RapidFinishingEquipment.com™

1.800.536.3461

ECONO-SERIES SYSTEM FEATURES

- Pre-engineered equipment - helps promote reduced lead times and cost, making it more economical than a custom finishing system
- Industrial grade materials - Longer operational life
- Energy efficient components - helps lower operating costs
- Optimally designed to minimize space requirements
- Specifically designed for Install-It-Yourself configurations

RAPID® Econo-Series Washer

SPECIFICATIONS

Product Opening (width x height) - in (cm)	36 x 60 (91.4 x 152.4)
Conveyor Speed (fpm)	4-8
Product Loading - lbs/hr (kg/hr)	12,000 (5443) of steel
Part Length (max) - in (cm)	72 (182.8)

APPLICATIONS

- Powder or liquid systems designed for custom coater jobshop applications
- Manufacturing - automotive, furniture, aerospace, military, farm equipment and other industries
- Product finishing - various metal and plastic substrates

RAPID® Econo-Series Finishing System Application

Econo-Series Washer Interior

ECONO SERIES WASHER SPECIFICATIONS

- **Significant savings opportunities when compared to custom-designed washers**
- **Constructed of high quality materials to help extend equipment life.**
- **High quality pumps, valves and gauges with proven reliability**
- **Shipped pre-assembled and pre-wired for quick installation and use**

The RAPID® Econo series multi-stage washer was specifically designed to meet common manufacturing product sizes and required production throughput from 4 to 8 feet per minute.

General

Product Opening (width x height) - in (cm)	36 x 60 (91.4 X 152.4)	
Clearance - in (cm)	18 (45.7) from top of rail to top of product opening	
	Clean/ Phosphate	**Rinse**
Burner Capacity (Btu/h*)	2,000,000	N/A
Burner Operating (Btu/h*)	1,600,000	N/A
GPM (each nozzle)	3.5	3
Nozzle Pressure (psi)	20	15
Nozzle Type	5050 VJet	5050 VJet
Pump (hp/gpm***)**	10/396	3/168
Tank Capacity (gallons)	1,200	500
Heated Stage(s) (length) ft (m)	7 (2.1)	
Rinse/Seal Stage(s) (length) ft (m)	3 (.91)	
Drain Zones (length)-ft,in (m)	6, 6 (2)	
Vestibules (length)-ft,in (m)	6, 10 (2.1)	
Finish	Enamel-painted (mild steel washers only)	

* Btu/h = British thermal unit / hour
** hp = horse power
*** gpm = gallons per minute

Overall Dimensions (width x height x length)

2-Stage - ft,in (m)	8 x 10 x 30, 2 (2.4 x 3 x 9.2)
3-Stage - ft,in (m)	8 x 10 x 39, 8 (2.4 x 3 x 12.1)
5-Stage - ft,in (m)	8 x 10 x 62, 8 (2.4 x 3 x 19.1)

Controls

- **Digital temperature controls**
- **Electronic flame safety controls with UV scanners**
- **Gas manifolds with factory mutual design standards**

Shipping

- **2-stage and 3-stage washers ship in one section**
- **5-stage washers ship in two sections**
- **Entrance/exit exhaust fans ship loose**

Materials

Tank and Drain Deck

- **10-gauge 304 stainless or 10-gauge mild steel tanks and drain decks in 2,3 or 5 stages**
- **Quality barrelmount pumps with stainless or mild steel shaft and impellers**
- **Stainless steel pump screen in each stage**
- **Schedule-10 304 stainless steel or schedule-40 mild steel standard immersion with tube burners (140° F (60° C) Maximum)**

Tunnel

- **14-gauge 304 stainless or 12-gauge mild steel tunnels**
- **Schedule-80 CPVC headers and risers**
- **Clip-on adjustable spray nozzles**
- **Full grating over tanks**

Options

- **Drain/overflow piping components**
- **Fresh-water fill (manifold with solenoid and electronic liquid-level controls)**
- **Tunnel access doors**
- **Tank clean-out doors**
- **Extended drain decks**
- **Alarm/horn in control panel**
- **Split-top design (33" (83.8 cm) clearance from the top of rail to top of opening maximum) n in control panel**
- **Brush moisture containment package for split-top design**
- **Wetted stainless steel barrel mount pumps**

ECONO-SERIES OVEN SPECIFICATIONS

	Dry-Off Oven		Cure Oven		
	1 Pass	2 Pass	2 Pass	3 Pass	4 Pass
Temperature ° F (° C) (maximum)	400 (204.44)	400 (204.44)	450 (232.22)	450 (232.22)	450 (232.22)
Time	5 minutes @ 6 fpm	5 minutes @ 6 fpm	20 minutes @ 6 fpm	20 minutes @ 6 fpm	20 minutes @ 6 fpm
Panels - in (cm)	5 (12.7)	5 (12.7)	5 (12.7)	5 (12.7)	5 (12.7)
Burner Type	Maxon 415 OP	Maxon 415 OP	Maxon 415 OP	Maxon 415 OP	Maxon 415 OP
Maximum (Btu/h)	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000
Estimated Operating (Btu/h)	1,035,000	1,073,000	1,277,000	1,255,000	1,249,000
Recirculation (cfm)	10,800	10,800	14,000	14,000	14,000
Recirculation Motor (hp)	10	10	15	15	15
Exhaust (cfm)	1,100	1,100	1,100	1,100	1,100
Exhaust Motor (hp)	.75	.75	.75	.75	.75
Exhaust Stack Size - in (cm)	10 (25.4)	10 (25.4)	10 (25.4)	10 (25.4)	10 (25.4)
Dimensions (width x height x length) - ft,in (cm)	6 x 10 x 31 (1.8 x 3 x 9.4)	13 x 10 x 17, 10 (4 x 3 x 5.4)	11 x 10 x 62, 6 (3.4 x 3 x 19)	15 x 10 x 43 (4.6 x 3 x 13.1)	19 x 10 x 33, 6 (5.8 x 3 x 10.2)
Electric Service (amps)	25	25	35	35	35

Cure Oven Exterior


Cure Oven Interior

Dry-Off Oven

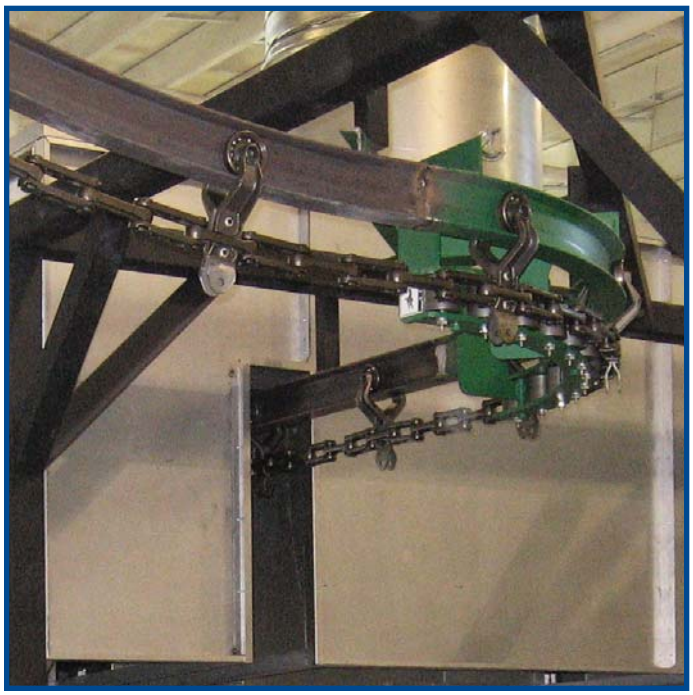
		Combination Ovens	
		1 Pass Dry-Off 3 Pass Cure	1 Pass Dry-Off 4 Pass Cure
Temperature ° F (° C) (maximum)		450 (232.22)	450 (232.22)
Time	Dry-Off	5 minutes @ 6 fpm	5 minutes @ 6 fpm
	Cure	20 minutes @ 6 fpm	20 minutes @ 6 fpm
Panels - in (cm)		5 (12.7)	5 (12.7)
Burner Type		Maxon 435 OP	Maxon 435 OP
Maximum (Btu/h)		3,850,000	3,850,000
Estimated Operating (Btu/h)		2,480,000	2,470,000
Recirculation (cfm)		28,500	28,500
Recirculation Motor (hp)		30	30
Exhaust (cfm)		2,245	2,245
Exhaust Motor (hp)		.75	.75
Exhaust Stack Size - in (cm)		12 (30.5)	12 (30.5)
Dimensions - ft,in (m) (width x height x length)		21 x 10 x 43 (6.4 x 3 x 13.1)	25 x 10 x 34 (7.6 x 3 x 10.4)
Electric Service (amps)		67	67

	IR Booster Oven 8' (2.4 m) Length	IR Booster Oven 16' (4.9 m) Length
Time	1.3 minutes @ 6 fpm	2.7 minutes @ 6 fpm
Panels - in (cm)	3 (7.6)	3 (7.6)
Emitter	Catalytic	Catalytic
Emitter Size - in (cm)	16 x 40 (40.6 x 101.6)	16 x 40 (40.6 x 101.6)
Emitter Quantity	16	32
Maximum (Btu/h) Emitter	35,400	35,400
Maximum (Btu/h) Consumption	566,400	1,132,800
Maximum Gas (cfh)	566	1,133
Exhaust (cfm)	1,000	2,000
Exhaust Motor (hp)	.75	1.5
Exhaust Stack - in (cm)	9 (22.9)	12 (30.5)
Dimensions - ft,in (m) (width x height x length)	5 x 9,3 x 10,10 (12.7 x 23.5 x 27.5)	5 x 9,3 x 19,10 (12.7 x 23.5 x 50.4)
Electric Service (amps)	48	94


IR Booster Oven

Complete Overhead Conveyor System

- Standard or heavy duty
- Tubular, enclosed track or I-beam
- Includes: drive, take-up, control, floor supports, automatic lubricator, tracks, turns, chain and 'H' attachments

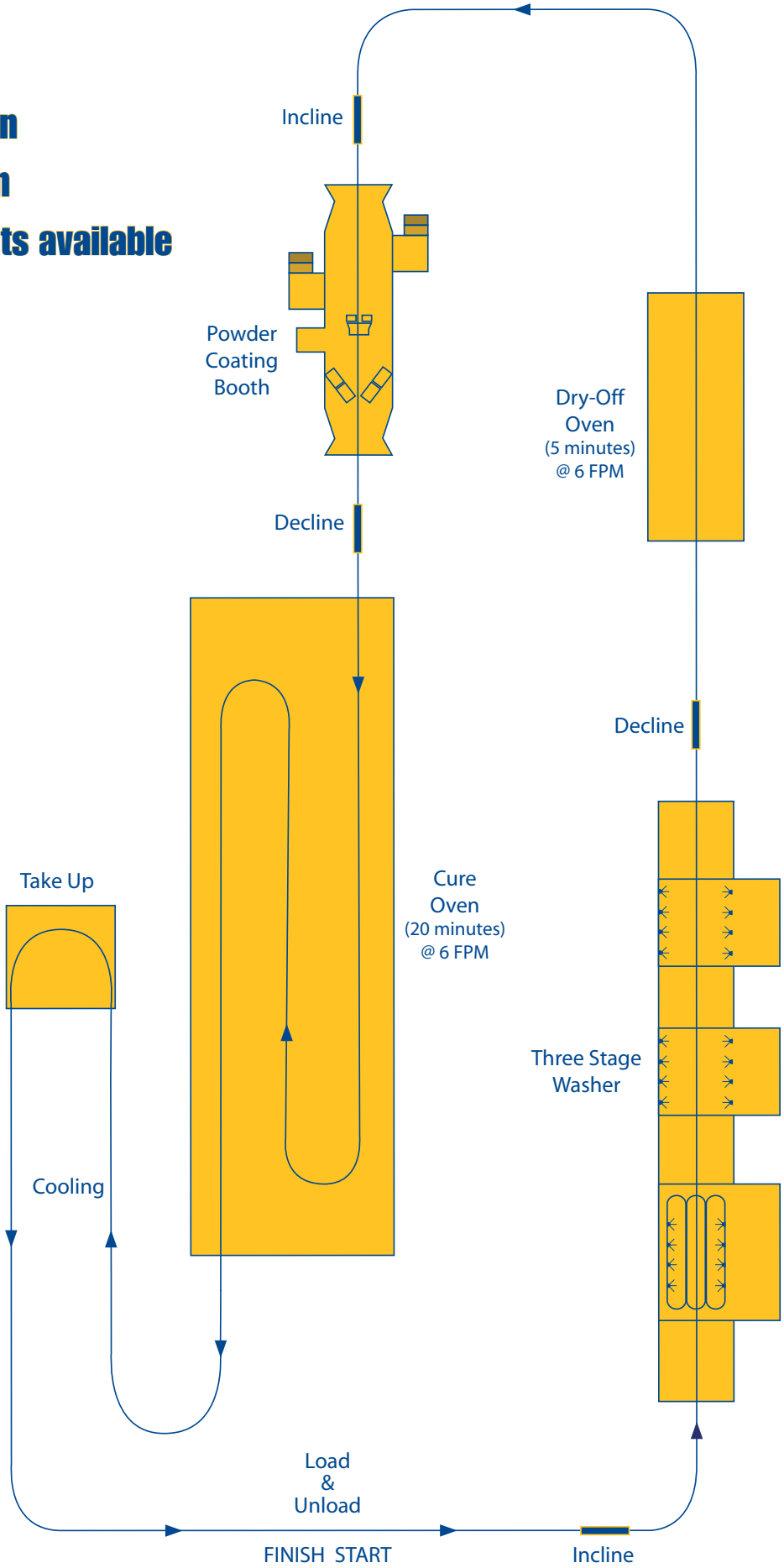


Contols

- AC variable frequency control with digital speed read out
- PLC based control system (optional)

ECONO FINISHING SYSTEM - LAYOUT 313

- Three stage washer
- One pass dry-off oven
- Three pass cure oven
- Other standard layouts available



The RAPID® Advantage

- **Quality products and reliable performance.**
- **Project management support.**
- **Complete design, manufacturing, installation and service capabilities.**
- **Extensive experience.**
- **Single source supply for components.**
- **On-time and on-budget delivery.**

Thank You for Your Business!

Installation Code and Annual Inspections:
All installation and service of RAPID® equipment must be performed by a contractor qualified in the installation and service of industrial processing and finishing equipment and conform to all requirements set forth in the RAPID® manuals and all applicable governmental authorities (including but not limited to NFPA-86) pertaining to the installation, service, operation and labeling of the equipment. Refer to the applicable installation, service and operation manual for safety shutoff valve leak test procedure and schedule.To help facilitate optimum performance and safety, Rapid Engineering LLC recommends that a qualified contractor conduct, at a minimum, annual inspections of your RAPID® equipment and perform service where necessary, using only replacement parts sold and supplied by Rapid Engineering LLC.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through RAPID® representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

These products are not for residential use.
This document is intended to assist licensed professionals in the exercise of their professional judgment.

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