

# Champion®

The Dishwashing Machine Specialists

Project \_\_\_\_\_  
Item No. \_\_\_\_\_  
Quantity \_\_\_\_\_

## STANDARD FEATURES

- **NEW Two-Tank Heat Recovery** Technology
- **No** Type II exhaust **hood** required
- **Saves** up to **13kW** during operation
- **Less than 70° conditioned air** back into the dish room
- Patent Pending modulation valve pressure system
- **NEW** cOS 2.0 Advanced Operating System
- Perpetual rack advance system, with intuitive jam alert, and drive protection
- Proportional rinse, delivering unmatched total ware coverage, utilizing digital pattern cloning, stainless steel nozzles
- 348 racks per hour
- 100 GPH with energy sentinel (idle pump shut-off)
- Top Mounted Prodigy series HMI User Interface
- Proactive maintenance interface, self-diagnostics, problem recognition, with repair recommendation, from HMI touch screen
- Programmable machine dwell with automatic rack alignment into the optimal wash zone
- **Automatic drain valve Exclusive!**
- Single-piece hood design
- Single-piece stainless steel upper and lower wash arm manifolds
- 20" standard vertical clearance which accommodates 18" x 26" sheet pans
- Full 180° opening leak proof insulated hinged access doors
- Stainless steel heavy gauge construction including base, legs and feet
- Enclosure panels (front and sides)
- Factory Authorized Start-up
- **Made in America**



## PRO SERIES

**86 PRO-FF HR Electric**  
Two-Tank Heat Recovery  
High Temperature Rack Conveyor  
Dishwashing Machine



*66PRO-FF-HR with optional blower-dryer shown for representation purposes only.*



*Photo is for general visual representation only. Please refer to specifications for the latest detailed product information.*

## SPECIFIER STATEMENT

Specified unit will be Champion Model 86 PRO-FF HR Series Two-Tank Heat Recovery high temperature Front Feeding rack conveyor dishwashing machine. Features top mounted Prodigy HMI user interface controls with proactive maintenance software, proportional rinse, using only 100 GPH, built-in 21 kW booster, progressive anti-jam drive system, energy sentinel (idle pump shut-off), 348 racks per hour, single-piece hood design, single-piece stainless steel upper & lower wash arms manifolds, full 180° opening leak proof insulated hinged access doors.

1 year parts and labor warranty.

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# PRO-FF SERIES

## 86 PRO-FF HR Electric

Two-Tank Heat Recovery  
High Temperature Rack Conveyor  
Front Feeding Dishwashing Machine

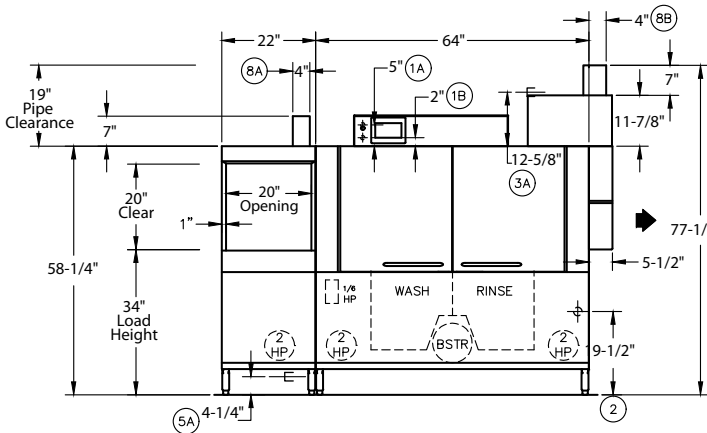
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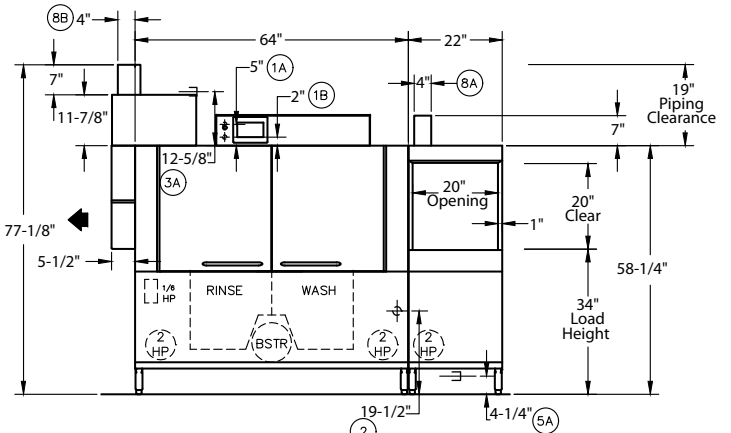
### MODEL 86 PRO-FF HR

Shipping weight crated: Machine only: 1,400

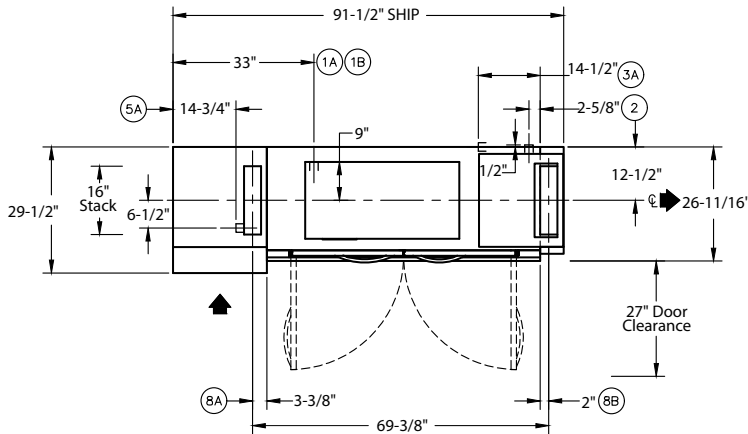
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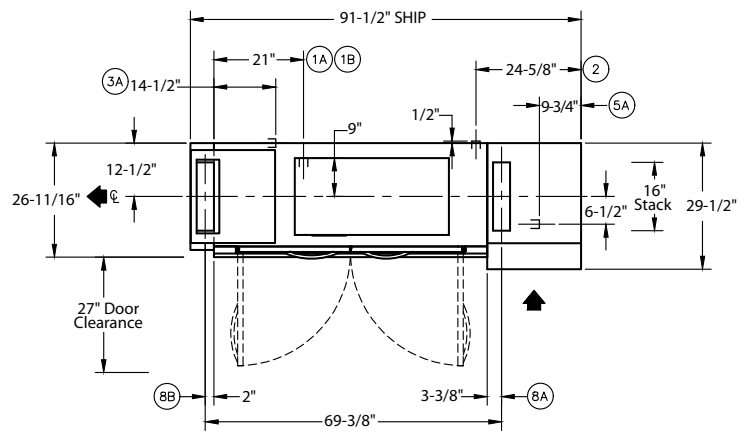
Front View Left to Right



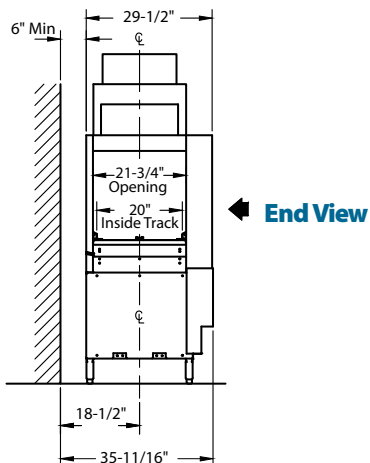
Front View Right to Left



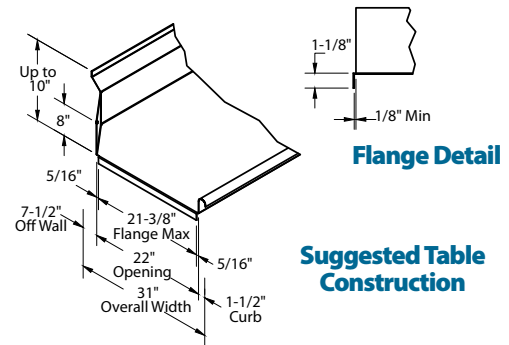
Plan View Left to Right



Plan View Right to Left



End View



Flange Detail

Suggested Table Construction

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# PRO-FF SERIES

## 86 PRO-FF HR Electric

Two-Tank Heat Recovery  
High Temperature Rack Conveyor  
Front Feeding Dishwashing Machine

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Utilities	
<b>1</b>	<b>Electrical Connection</b> <b>A</b> Machine electrical connection (to include tank heat) <b>B</b> Booster electrical connection
<b>2</b>	<b>Hot Water</b> Tank fill 3/4" NPT; 110° incoming water
<b>3</b>	<b>Cold Water</b> Booster connection 1/2" NPT, minimum 50° at 40 psi
<b>5</b>	<b>Drain</b> Connection 1-1/4" NPT

**Warning:** Plumbing and electrical connections should be made by qualified personnel who will observe all the applicable plumbing, sanitary, safety codes and the National Electrical Code.

**Note:** Water Hammer Arrestor (meeting ASSE-1010 standard or equivalent) to be supplied (by others) in common water supply line at service connection.

**Plumbing Notes:** Because of the variation in house-supplied steam and water pressures, steam and water pressure regulating valves (PRVs) may be needed. (Water PRV is standard on machines with booster.) The PRVs can either be purchased from Champion or obtained locally.

**Optional Drain Tempering:** 1/2" NPT cold water connection required. 1/2" NPT drain connection from back flow preventer to house drain. (FIELD INSTALLED and PLUMBED).

86 PRO-FF HR Electric Heat (1A)			
Electrical Specifications	Rated Amps	Minimum Supply Circuit Ampacity	Maximum Overcurrent Protective Device
208/60/3	124	175	175
240/60/3	111	150	150
480/60/3	55	70	70
575/60/3	43	60	60

86 PRO-FF Electric 21 kW Booster (1B)			
Electrical Specifications	Rated Amps	Minimum Supply Circuit Ampacity	Maximum Overcurrent Protective Device
208/60/3	59	80	80
240/60/3	51	70	70
480/60/3	26	35	35
575/60/3	22	30	30

## SPECIFICATIONS

### Capacity

Racks per hr. (NSF rated) . . . . .	348
Wash tank (US gal.) . . . . .	17
Standard conveyor speed (ft/min.) . . . . .	9.55
Pot/Pan Mode conveyor speed (ft/min.) . . . . .	4.6
Power Rinse (US gal.) . . . . .	17

### Motor Horsepower

Drive . . . . .	1/6
Wash . . . . .	2
Power Rinse . . . . .	2
PreWash. . . . .	2

### Water Consumption

US Gal. per hr. (max. use) . . . . .	100
US Gal. per rack. . . . .	0.29

### Heating

Wash Tank Heat, electric (kW) . . . . .	15
Electric booster (built-in) (kW supplied for 70°F rise) . . . . .	21
Power Rinse (kW) . . . . .	10

*Booster heaters completely inter plumbed, controls are interwired*

### Standard 20" x 20" rack complement

Peg . . . . .	1
Flat . . . . .	1

# PRO-FF SERIES

PRO-FF SERIES RACK CONVEYOR

## 86 PRO-FF HR Electric

Two-Tank Heat Recovery  
High Temperature Rack Conveyor  
Front Feeding Dishwashing Machine

### OPTIONS & ACCESSORIES

- 33" Blower Dryer – steam or electric
- Racks:
  - Peg
  - Flat racks
- Table limit switch, unmounted (recommended on all rack conveyor installations) (unmounted)
- Water pressure regulating valve (unmounted) (standard with booster)
- Water hammer kit (unmounted)
- Drain tempering kit (unmounted)
- Model PRO90 Unloader (90° Corner Conveyor Table)
- Model RCT 64 or RCT 84 Roller Conveyor Table (See factory for custom length)
- Splash shields (load end only)
- ION scale prevention device (unmounted)
- DirectLink — internet connectivity solution allowing remote-in factory service support
- DirectLink Plus — standard DirectLink with additional data storage and customized web portal to download temperature data

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**NEW PRO-90**  
90° Corner Conveyor  
Table (shown)  
*Unloader only*



**Model RCT 64  
or RCT 84**  
Roller  
Conveyor Table

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Project \_\_\_\_\_  
Item No. \_\_\_\_\_  
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- Single-piece stainless steel upper and lower wash arm manifolds
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- Factory Authorized Start-up
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## PRO-FF SERIES

**86 PRO-FF HR Steam**  
Two-Tank Heat Recovery  
High Temperature Rack Conveyor  
Front Feeding Dishwashing Machine



*66PRO-FF-HR with optional blower-dryer shown for representation purposes only.*



*Photo is for general visual representation only. Please refer to specifications for the latest detailed product information.*

## SPECIFIER STATEMENT

Specified unit will be Champion Model 86 PRO-FF HR Series Two-Tank Heat Recovery high temperature Front Feeding rack conveyor dishwashing machine. Features top mounted Prodigy HMI user interface controls with proactive maintenance software, proportional rinse, using only 100 GPH, built-in 21 kW booster, progressive anti-jam drive system, energy sentinel (idle pump shut-off), 348 racks per hour, single-piece hood design, single-piece stainless steel upper & lower wash arms manifolds, full 180° opening leak proof insulated hinged access doors.

1 year parts and labor warranty.

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# PRO-FF SERIES

## 86 PRO-FF HR Steam

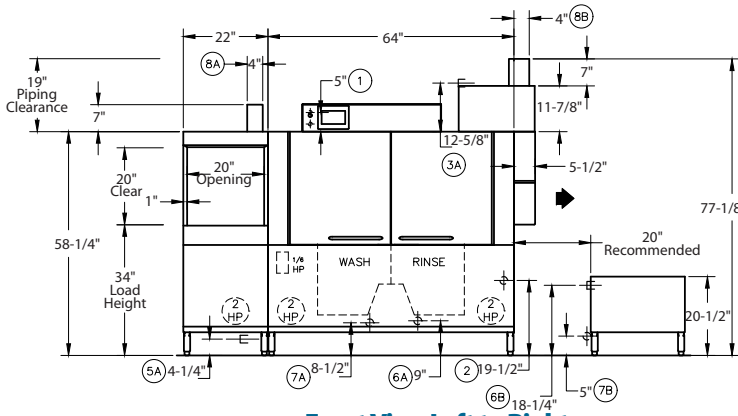
Two-Tank Heat Recovery  
High Temperature Rack Conveyor  
Front Feeding Dishwashing Machine

# Champion®

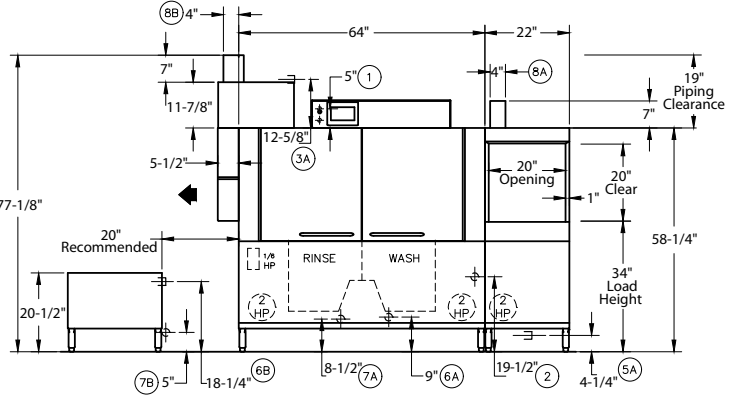
The Dishwashing Machine Specialists

**MODEL 86 PRO-FF HR STEAM** Shipping weight crated: Machine only: 1,400

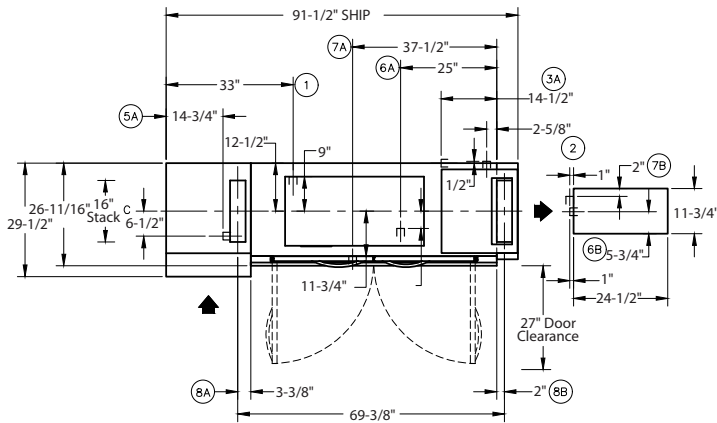
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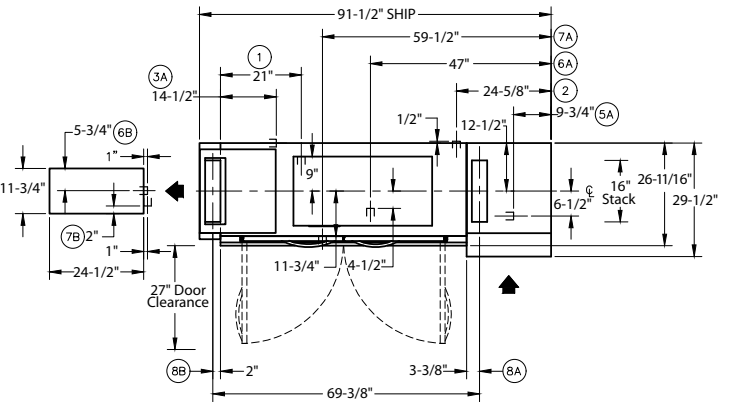
**Front View Left to Right**



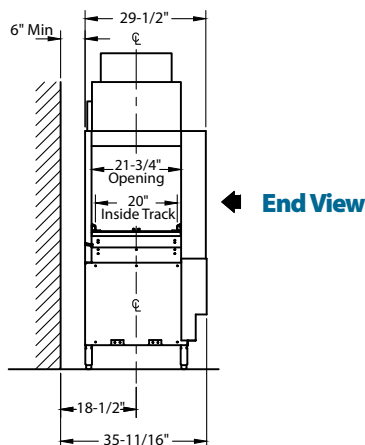
**Front View Right to Left**



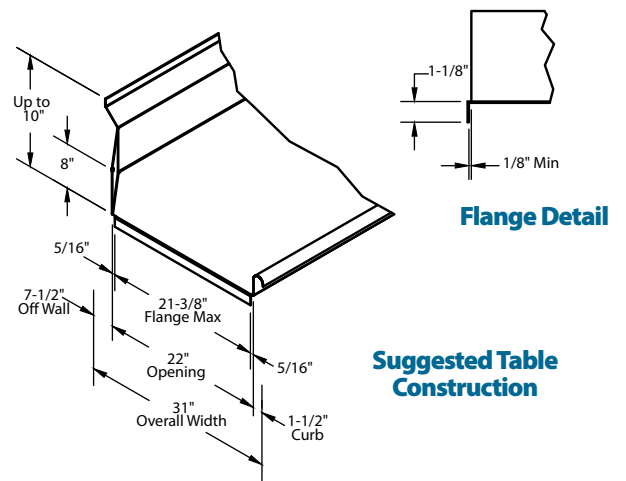
**Plan View Left to Right**



**Plan View Right to Left**



**End View**



**Flange Detail**

**Suggested Table Construction**

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## 86 PRO-FF HR Steam

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Utilities	
<b>1</b>	<b>Electrical Connection –</b> Machine requirements 5.17Hp (See electrical chart for amp loads) (Stepdown transformer provides 120V cont.)
<b>2</b>	<b>Hot Water</b> 110°F 3/4" NPT Connection with external booster water consumption 100 gph at 20 psi
<b>3</b>	<b>Cold Water</b> 50°F - 70°F (optional) 1/2" NPT drain water tempering kit PRV to be supplied by others if pressure exceeds 60 psi
<b>4</b>	<b>Hot Water</b> 180°F 3/4" NPT water consumption 100 gph at 20 psi PRV by others if pressure is higher (water connection without supplied booster)
<b>5</b>	<b>Drain</b> Connection 1-1/4" NPT
<b>6</b>	<b>Steam Flow Press</b> (10-30 psi) <b>A</b> 1" NPT tank heat; 125 lb/hr consumption <b>B</b> 3/4" NPT booster; 110 lb/hr consumption
<b>7</b>	<b>Condensate No Back Pressure</b> <b>A</b> 3/4" NPT machine return to boiler <b>B</b> 1/2" NPT machine return to boiler
<b>8</b>	<b>Vents</b> 4" x 16" Inside <b>A</b> Load end: 150 CFM at 1/4" SP <b>B</b> Unload end: 400 CFM at 1/4" SP

**Warning:** Plumbing and electrical connections should be made by qualified personnel who will observe all the applicable plumbing, sanitary, safety codes and the National Electrical Code.

**Note:** Water Hammer Arrestor (meeting ASSE-1010 standard or equivalent) to be supplied (by others) in common water supply line at service connection.

**Plumbing Notes:** Because of the variation in house-supplied steam and water pressures, steam and water pressure regulating valves (PRVs) may be needed. (Water PRV is standard on machines with booster.) The PRVs can either be purchased from Champion or obtained locally.

**Venting Notes:** Fabricated duct size: 3-7/8" x 15-7/8" (Outside dimensions)

**Optional Drain Tempering:** 1/2" NPT cold water connection required. 1/2" NPT drain connection from back flow preventer to house drain. (FIELD INSTALLED and PLUMBED).

## Two Tank PRO Rack Machine and Booster Ratings

The table below gives the ratings for each model.

86 PRO-FF HR Steam Heat (1A)			
Electrical Specifications	Rated Amps	Minimum Supply Circuit Ampacity	Maximum Overcurrent Protective Device
208/60/3	124	175	175
240/60/3	111	150	150
480/60/3	55	70	70
575/60/3	43	60	60

86 PRO-FF Steam 21 kW Booster (1B)			
Electrical Specifications	Rated Amps	Minimum Supply Circuit Ampacity	Maximum Overcurrent Protective Device
208/60/3	59	80	80
240/60/3	51	70	70
480/60/3	26	35	35
575/60/3	22	30	30

## SPECIFICATIONS

### Capacity

Racks per hr. (NSF rated)	348
Wash tank (US gal.)	17
Power Rinse tank	17
Conveyor speed (ft/min.)	9.55
Conveyor speed Pot/Pan Mode (ft/min.)	4.6
(only one rack at a time in Pot/Pan Mode)	

### Motor Horsepower

Drive	1/6
Wash	2
Power Rinse	2
PreWash	2

### Water Consumption

US Gal. per hr. (max. use)	100
US Gal. per rack	0.29

### Heating (10-30 psi flow pressure)

Tank heat, steam (lbs./hr. required)	125
Steam booster (lbs./hr. required for 70°F rise)	110
<i>Booster heaters completely inter plumbed, controls are interwired</i>	

### Standard 20" x 20" rack complement

Peg	1
Flat	1

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# PRO-FF SERIES

PRO-FF SERIES RACK CONVEYOR

## 86 PRO-FF HR Steam

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### OPTIONS & ACCESSORIES

- 33" Blower Dryer – steam or electric
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**NEW PRO-90**  
90° Corner Conveyor  
Table (shown)

*Unloader only*



**Model RCT 64  
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Roller  
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