

# SPRINT® 3000



## Gas Screen Printing Conveyor Dryer



### FEATURES

- **AccuSet™ displays belt speed as heat-chamber retention time, making it easy to match ink manufacturers' curing requirements**
- **Adjustable roll-down outfeed hood features high-capacity, variable-speed exhaust blower**
- **Access panels on every dryer section provide full interior access to keep the dryer clean and operating at peak efficiency**

Sprint 3000 is the most innovative and dependable gas dryer in the industry. Sprint 3000's large color touchscreen control center features icon-based labeling and can display information and commands in multiple languages. It also displays real-time performance data, including temperature, temperature history, and output from the included temperature probe, which can be used to track substrate temperature as it passes through the dryer.

M&R's AccuSet™ retention-time belt-speed controller makes it easy to duplicate settings and eliminates the need to convert feet per minute into the time substrates will spend in the heat chamber (U.S. Patent Pending: SN 13967564). And M&R's DynaBelt™ dynamic belt-speed controller shortens warmup and cooldown times and reduces overall energy consumption by automatically setting the conveyor belt to its minimum speed upon dryer startup and to its maximum speed upon dryer shutdown (U.S. Patent Pending: SN 15251547). In addition, raising or lowering the dryer temperature by more than 3° C (5° F) during operation results in DynaBelt™ changing the belt speed to maximum (when raising) or minimum (when lowering) until the desired temperature is attained.

Sprint 3000's variable-frequency AC-drive motor powers M&R's Teflon-coated fiberglass Patriot Belt™ with the SureTrak™ roller system (U.S. Patents Pending: SN 15194035 & 15265538). The red flexible bead stitched along one edge of the Patriot Belt rides in grooves machined into the large anodized aluminum SureTrak rollers. It's the most precise dryer belt tracking available.

M&R's optional Crossover™ Belt System (U.S. Patent Pending: SN 15264277), with independently variable speeds and instant change of direction on double or triple-belt drives, is a game-changing approach to split-belt curing. Each belt has its own flexible bead and machined groove to reduce the gap between belts to a mere 0.95 cm (3/8"), and the AccuSet speed settings are so precise that two or three belts running in the same direction at the same set speed can be easily used as one wide belt. In fact, the Crossover Belt System delivers such exacting control that one belt in a single-chamber, single-burner system can be used to cure traditional plastisol while the other belt can be used for curing water-based inks or DTG apparel. That simply can't be done easily with unsophisticated conventional split-belt dryers.

Job Recall™ allows operators to store operational parameters—and recall those settings for similar substrate/ink combinations. On Crossover Belt Systems, Job Recall allows users to create, store, and retrieve job recipes that contain heat-chamber temperature and direction and speed settings for each belt. Double-belt drives are available on models with belt widths of 122 cm (48") and wider, and triple-belt drives are available on models with belt widths of 183 cm (72") and 213 cm (84").

Other features include high-capacity circulation and exhaust blowers; an integrated roll-down outfeed hood with exhaust blower; adjustable entry and exit openings; and cleanout access panels on the sides of the burner sections and drone modules to simplify cleaning and maintenance. And M&R's Maintenance Minder™ System alerts operators when scheduled maintenance is due.

Available in liquid propane (LP) or Natural Gas (NG), Sprint 3000 dryers use high-performance burners. The burner system includes its own combustion air blower, and a high-volume forced air system quickly brings the dryer to the desired temperature. Process temperatures and set temperatures are controlled digitally. A fuzzy-logic controller keeps chamber heat within one degree of target temperature. A tower light shows when temperatures are within user-set parameters, and issues visible and audible alarms when readings fall outside those settings. An automatic shutdown sequence keeps the blower and belt running until the chamber has cooled.

Sprint 3000 dryers are available in a wide variety of configurations, belt widths, and chamber lengths, including multi-burner models of 12.2 meters (40 feet) or more for slow-curing inks and a 6.1 meter (20 foot) heat chamber that requires only a single burner. Sprint 3000 dryers have the highest production capacity in their class and are the most energy efficient. CoolSkin™ thermal insulation prevents heat from migrating into the workplace and leaves dryer skin cool to the touch. Sprint 3000 Series is simply the world's most sought after line of dryers.

[www.mrprint.com](http://www.mrprint.com)  
[store.mrprint.com](http://store.mrprint.com)

# SPRINT® 3000

## STANDARD FEATURES

### AIR HANDLING

- Enhanced airflow accelerates drying/curing
- Four separate dedicated blowers (combustion, circulation, exhaust & outfeed hood exhaust)
- High-volume circulation blower reduces energy costs
- Integrated roll-down outfeed hood with exhaust blower
- Stainless steel filter slides out for easy cleaning



INTEGRATED ROLL-DOWN OUTFEED HOOD



OUTFEED HOOD INCLUDES POWERED EXHAUST BLOWER

### CERTIFICATION

- CE Certified: Built to specifications established by the European Committee for Standardization® (CE)
- CSA Certified: Built to specifications established by the CSA Group (models sold in Australia are AGA Certified: Built to specifications established by the Australian Gas Association)
- UL Listed: Built to specifications established by Underwriters Laboratories® (UL)

### COLOR TOUCHSCREEN CONTROL CENTER

- Automatic shutdown sequence keeps the blower and belt running until the conveyor dryer chamber has cooled
- Displays key operational information—including heat chamber temperature and retention time—and gives operators complete control of all screen printing conveyor dryer functions
- Graphic display tracks dryer temperature and substrate temperature in real time
- Job Recall™ allows operators to store operational parameters under operator-chosen alphanumeric names—and recall those named settings later for similar substrate/ink combinations
- Maintenance Minder™ system alerts operators when scheduled maintenance is due
- Temperature monitor issues visible and audible alarms when readings fall outside user-specified parameters
- Tower light indicates when temperatures are within user-set tolerances

## OPTIONS

### CONVEYOR SYSTEM

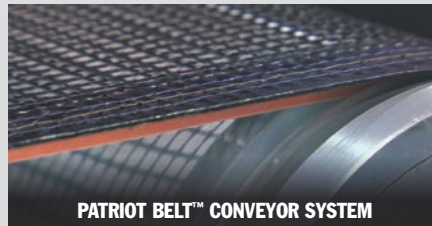
- Infeed and outfeed conveyor extension sections are available in 122 cm (48") increments

### CROSSOVER™ BELT SYSTEM

- Available on belt widths of 122 cm (48") and wider
- Crossover belt drive offers variable speed and direction on double or triple-belt drives
- Crossover conveyor belts are available in a 61 cm (24") minimum width; wider belts are available in 30 cm (12") increments
- Each Patriot Belt has a tracking bead matched to a corresponding SureTrak groove in the drive cylinder

### CONVEYOR SYSTEM

- AccuSet™ retention-time belt-speed controller makes it easy to duplicate settings and eliminates the need to convert feet per minute into the time substrates will spend in the heat chamber (U.S. Patent Pending; SN 13967564)
- Driven by a reliable, heavy-duty, variable-frequency AC-drive motor
- DynaBelt™ dynamic belt-speed controller shortens warmup and cooldown times and reduces overall energy consumption by automatically setting the conveyor belt to its minimum speed upon dryer startup and to its maximum speed upon dryer shutdown—and raising or lowering dryer temperature by more than 3° C (5° F) during operation results in DynaBelt™ changing the belt speed to maximum (when raising) or minimum (when lowering) until the desired temperature is attained (U.S. Patent Pending; SN 15251547)



PATRIOT BELT™ CONVEYOR SYSTEM

- Patriot Belt™ with the SureTrak™ roller system features a heat-resistant, Teflon®-coated fiberglass belt with a red flexible bead stitched along one edge that rides in grooves machined into the large anodized aluminum rollers, providing the most precise belt tracking available (U.S. Patents Pending; SN 15194035 & 15265538)

### DESIGN & CONSTRUCTION

- Adjustable entry/exit openings
- Air-cooled cabinet ensures long life for electrical components
- Bearings are designed for high speeds and high temperatures
- Circuit breakers allow easy reset



CLEANOUT ACCESS PANEL

- Cleanout access panels on the sides of the burner sections and drone modules simplify cleaning and maintenance
- Exhaust Drawer/Creosote Catcher
- Low-profile design makes it easier to see over the screen printing dryer
- Modular design and specialized fasteners make it easy to attach additional 61 cm (24") expansion modules

- M&R's AccuSet retention-time belt-speed controller, coupled with M&R's Patriot Belt/SureTrak belt-tracking system and Sprint 3000's precise variable-frequency AC drive motors make it possible to change belt directions and speeds instantly without the need to re-track belts or recalibrate speeds
- On Crossover Belt Systems, Job Recall allows users to create, store, and retrieve job recipes that contain heat-chamber temperature and direction and speed settings for each belt, making setup for repeat and similar drying scenarios a snap
- Previously lost space between belts has been reduced and belts widened due to M&R's superior belt-tracking methods
- Standard configurations place the narrowest belt closest to the control panel side

### ENERGY EFFICIENCY

- Burners are designed with excess capacity that far exceeds consumption rates under normal operating conditions
- Controller ensures consistency by keeping dryer chamber heat within 1° of target temperature at the thermocouple
- CoolSkin™ technology leaves the conveyor dryer skin cool to the touch
- Fast curing rates and high product throughput maximize conveyor dryer capacity and minimize per-unit cost
- Fast Warmup/Cooldown shortens warmup and cooldown times by automatically setting the conveyor belt to its minimum speed upon dryer startup and setting the conveyor belt to its maximum speed upon dryer shutdown, reducing overall energy consumption. In addition, raising or lowering dryer temperature by more than ten degrees during operation results in a proportional decrease or increase in conveyor belt speed until the desired temperature has been attained
- Heavy-duty thermal insulation prevents heat from migrating from the conveyor dryer into the workplace
- Pressurized vector air knives provide consistent and uniform temperatures throughout the drying chamber
- Process temperature and set temperature are displayed and controlled digitally
- Sprint 3000 models are the most energy-efficient gas screen printing conveyor dryers in their class

### HEAT CHAMBER

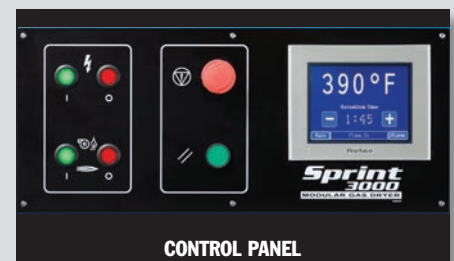
- Burners are available for liquid propane (LP) or natural gas (NG)
- Double-wall construction
- Galvanized steel interior
- Modular gas train simplifies maintenance

### PRODUCTIVITY

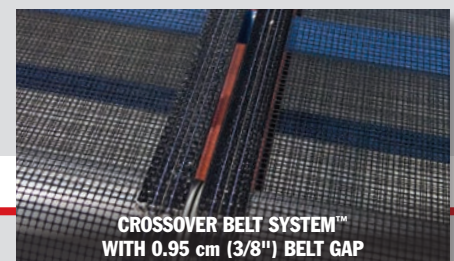
- Sprint 3000 models have the highest production capacity of any gas screen printing conveyor dryer in their class

### WARRANTY, SERVICE AND SUPPORT

- 24-hour hotline is staffed 365 days a year
- Access to M&R's Training Center
- Parts & supplies are available online at [store.mrprint.com](http://store.mrprint.com)
- Two-year limited warranty



CONTROL PANEL



CROSSOVER BELT SYSTEM™ WITH 0.95 cm (3/8") BELT GAP

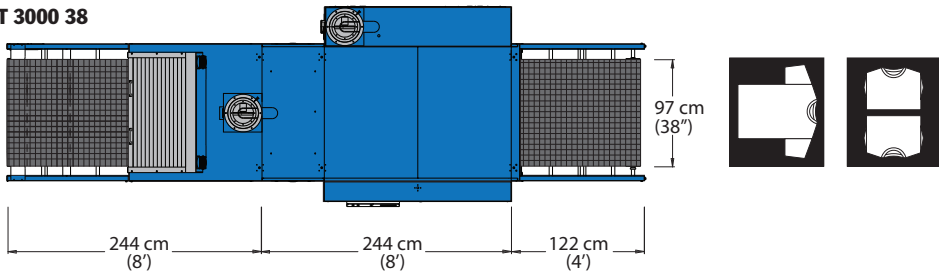
- Triple-belt drives are available on models with belt widths of 183 cm (72") and 213 cm (84")
- Twin-belt drives are available on models with belt widths of 122 cm (48"), 152 cm (60"), 183 cm (72"), and 213 cm (84")
- U.S. Patent Pending; SN 15264277

### HEAT CHAMBER

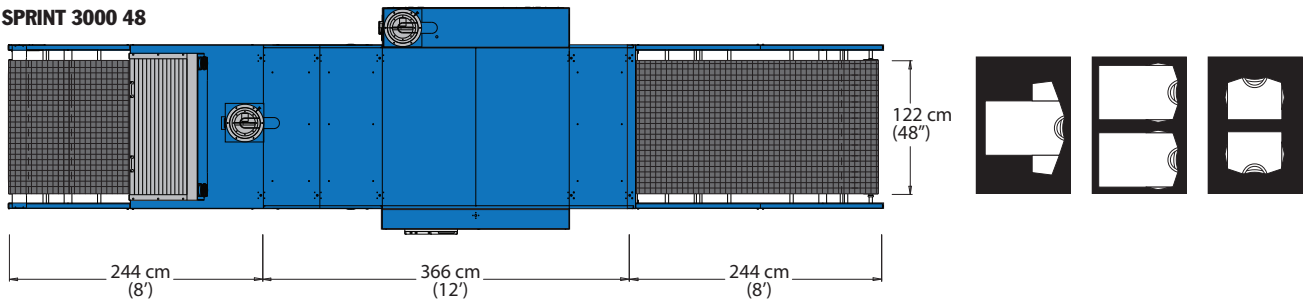
- 61 cm (24") expansion modules enable heat chamber lengths up to 610 cm (20") with a single burner section
- 61 cm (24") infrared pre-heat module speeds throughput

# DIMENSIONS

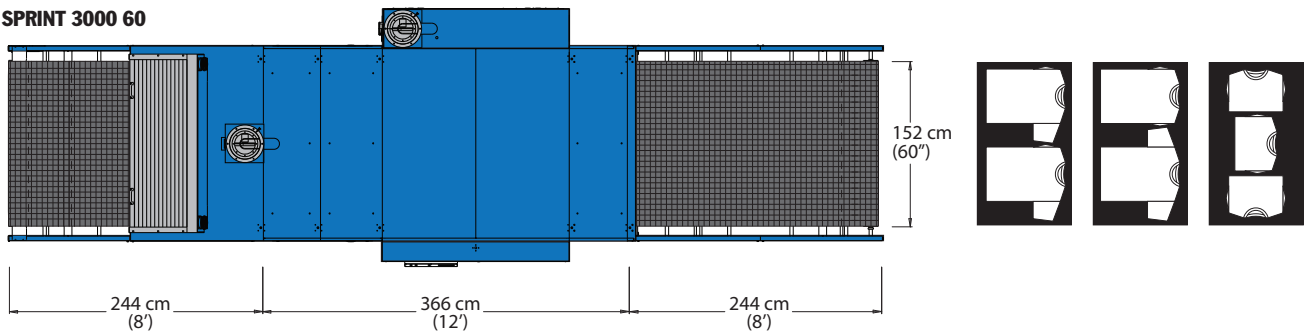
**SPRINT 3000 38**



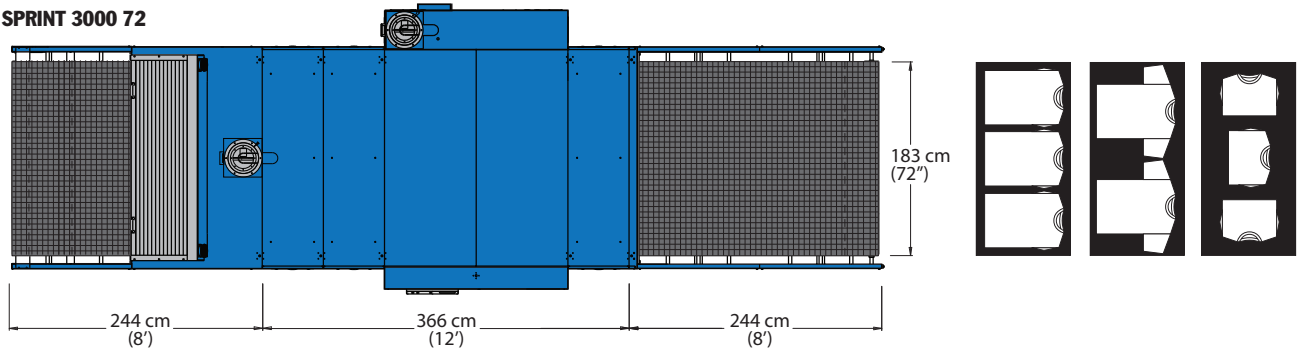
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**SPRINT 3000 60**

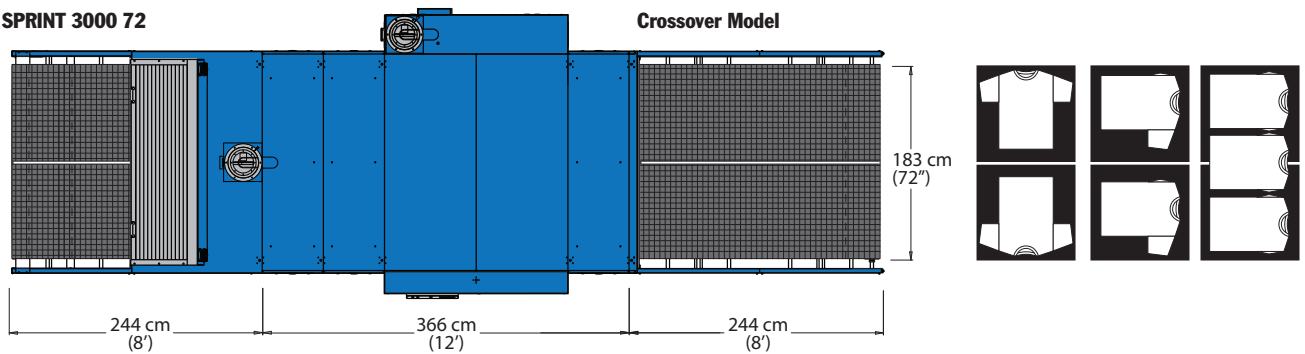


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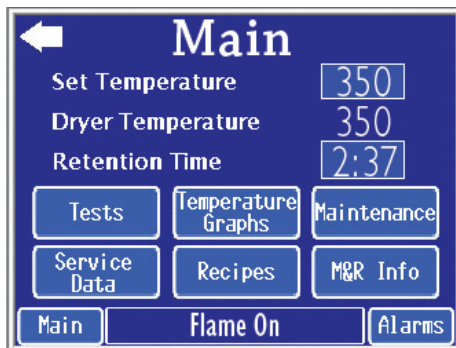
**SPRINT 3000 72**

**Crossover Model**



# SPRINT® 3000

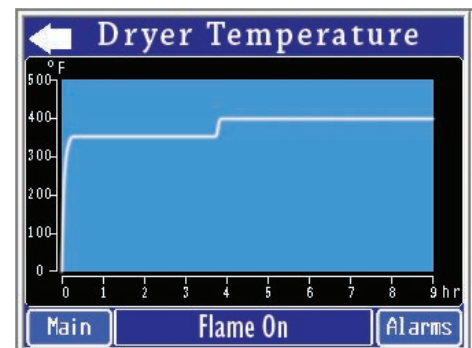
## TOUCH SCREEN CONTROL PANEL



Color touchscreen control center displays key operational information



Job Recall™ allows operators to store operational parameters and recall those named settings later



Graphic display tracks dryer temperature and substrate temperature in real time

## SPECIFICATIONS

	Sprint 3000-38	Sprint 3000-48	Sprint 3000-60	Sprint 3000-72	Sprint 3000-84
Belt Width	96 cm (38")	122 cm (48")	152 cm (60")	183 cm (72")	213 cm (84")
Burner Input Maximum <sup>3</sup>	200 000 Btu	300 000 Btu	300 000 Btu	300 000 Btu	300 000 Btu
Burner Width	197 cm (77.5")	222 cm (87.5")	253 cm (99.5")	283 cm (111.5")	314 cm (123.5")
Electrical Requirements <sup>1</sup>	208/230 V, 1 ph, 19/18 A, 50/60 Hz, 2.9 kW 208/230 V, 3 ph, 12/11 A, 50/60 Hz, 2.9 kW 380/415 V, 3 ph, 10 A, 50 Hz, 2.9 kW	208/230 V, 3 ph, 24/23 A, 50/60 Hz, 5.8 kW 380/415 V, 3 ph, 18 A, 50 Hz, 5.8 kW	208/230 V, 3 ph, 24/23 A, 50/60 Hz, 5.8 kW 380/415 V, 3 ph, 18 A, 50 Hz, 5.8 kW	208/230 V, 3 ph, 34/33 A, 50/60 Hz, 7.7 kW 380/415 V, 3 ph, 21 A, 50 Hz, 7.7 kW	208/230 V, 3 ph, 36/35 A, 50/60 Hz, 8.4 kW 380/415 V, 3 ph, 22 A, 50 Hz, 8.4 kW
Electrical requirements for 61 cm (24")	208/230 V, 1 ph, 19/21 A, 50/60 Hz, 3.7 kW	208/230 V, 3 ph, 15/17 A, 50/60 Hz, 5 kW	208/230 V, 3 ph, 19/21 A, 50/60 Hz, 6.2 kW	208/230 V, 3 ph, 21/23 A, 50/60 Hz, 7.4 kW	208/230 V, 3 ph, 25/27 A, 50/60 Hz, 8.5 kW
Optional Radiant Section <sup>1</sup>	208/230 V, 3 ph, 11/12 A, 50/60 Hz, 3.7 kW 380/415 V, 3 ph, 8 A, 50 Hz, 3.7 kW	380/415 V, 3 ph, 9 A, 50 Hz, 5 kW	380/415 V, 3 ph, 11 A, 50 Hz, 6.2 kW	380/415 V, 3 ph, 13 A, 50 Hz, 7.4 kW	380/415 V, 3 ph, 14 A, 50 Hz, 8.5 kW
Exhaust Blower Size	30 cm (12")	30 cm (12")	30 cm (12")	30 cm (12")	30 cm (12")
Exhaust System Capacity @ 6 mm (1/4") Static Pressure	50970 l/min (1800 cfm)	50970 l/min (1800 cfm)	50970 l/min (1800 cfm)	50970 l/min (1800 cfm)	50970 l/min (1800 cfm)
Expansion Heat Modules	61 cm (24")	61 cm (24")	61 cm (24")	61 cm (24")	61 cm (24")
Gas Input Size	2.54 cm (1")	2.54 cm (1")	2.54 cm (1")	2.54 cm (1")	2.54 cm (1")
Heat Chamber Length	244 - 610+ cm (8' - 20+')	244 - 610+ cm (8' - 20+')	244 - 610+ cm (8' - 20+')	244 - 610+ cm (8' - 20+')	366 - 610+ cm (12' - 20+')
Heat Chamber Width	135 cm (53")	160 cm (63")	191 cm (75")	221 cm (87")	251 cm (99")
LP/Natural Gas Input Pressure	.93 mm Hg (5" w.c.)	.93 mm Hg (5" w.c.)	.93 mm Hg (5" w.c.)	.93 mm Hg (5" w.c.)	.93 mm Hg (5" w.c.)
Overall Length	610 - 1097+ cm (20' - 36+')	732 - 1524+ cm (24' - 50+')	732 - 1524+ cm (24' - 50+')	732 - 1524+ cm (24' - 50+')	732 - 1524+ cm (24' - 50+')
Shipping Weight <sup>4</sup>	1496 kg (3300 lb)	1678 kg (3700 lb)	1860 kg (4100 lb)	2177 kg (4800 lb)	2494 kg (5500 lb)
Standard Infeed/Outfeed Length	122 cm (48") / 244 cm (96")	244 cm (96") / 244 cm (96")	244 cm (96") / 244 cm (96")	244 cm (96") / 244 cm (96")	244 cm (96") / 244 cm (96")

<sup>1</sup> If incoming voltage differs from the voltage(s) listed in this brochure, calculate amperage accordingly. Other electrical configurations are available. Contact the M&R Companies for details.

<sup>2</sup> Measured at the Exhaust Discharge Port

<sup>3</sup> Normal usage varies, but is significantly lower than the stated maximum

<sup>4</sup> Weight applies to models with a 244 cm (96") heat/expansion chamber



The M&R Companies

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