



# WL-3P

## THERMAL DECOMPOSITION REACTOR

The **WL-3P** is White Lion's compact, containerized pyrolysis system engineered for smaller industrial sites, pilot projects, or distributed waste-to-energy hubs. It continuously converts  $\approx$  3 tons per day of scrap tires or biomass into fuel oil, carbon black (biochar), and reusable syngas using the same stainless-steel, oxygen-free thermal decomposition process deployed in all **WL**-series units.



### Feedstock Input

For every 3 tons of input feedstock daily, you can produce...



### Fuel & Energy Production

Approx. 430 gallons of pyrolysis crude oil, convertible to diesel by the **WL-3P** distillation system.



### Carbon / Credits

Approx. 1 ton of carbon black/biochar for industrial and agricultural use.

The included distillation module (**WL-3P**) refines crude oil to low-sulfur, high-cetane diesel meeting ASTM specifications.

**3 TONS/DAY | ~430 GAL CRUDE/DAY | ~100 KW**

[www.whitelionenergy.com](http://www.whitelionenergy.com)



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### CORE TECHNICAL DATA

PARAMETER	WL-3P SPECIFICATIONS
Input Capacity	3 tons/day (≈ 0.125 t/hr)
Crude Oil Output (45 %)	~1.35 t/day ≈ 430 gal/day
Carbon Black / Biochar (35 %)	~1.05 t/day
Syngas (20 %)	~0.6 t/day (reused internally for heat)
Voltage	208/230 V, 3-phase, 60 Hz (customizable)
Power Consumption	≈ 4.2 kW continuous
Startup Fuel (Heavy Oil)	1.8 gal/hr
Water Make-up (Cooling)	~4 gal/hr
Operating Cycle	60 days continuous + ≈ 3 days maintenance
Material	15-7 Stainless Steel Reactor
Working Pressure	-50 to -100 Pa
Heating System	Hot-air circulation using recovered syngas
Cooling System	Closed-loop condenser + emission scrubber
Control System	Schneider PLC with remote monitoring 3
Staffing	operators per shift
Reactor Warranty	5 years
Remote Monitoring	Included (36 months)

### PHYSICAL & SITE REQUIREMENTS

ITEM	WL-3P REQUIREMENT
Footprint	40 ft L x 9 ft W x 9.5 ft H (containerized layout)
Recommended Pad	4,000 psi reinforced concrete
Building Type	Can operate in open yard or under roof
Power Integration	Can run off-grid via 100 kW genset and 2 MW battery bank
Environmental Controls	Dual scrubber + condensate recovery to ISO 14001 standard

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### MAINTENANCE & SUPPORT

ITEM	DETAILS
Annual Maintenance (after Yr 1)	≈ \$30,000 per year (quarterly PM)
Service Intervals	Quarterly inspection + scrubber media change
Spare Parts Kit	12-month consumables included
Training	5-day on-site O&M program
Monitoring	36 months remote diagnostics included

### SCALABILITY & INTEGRATION



#### Modular Expansion

A second WL-3P can be added without replicating all utilities, cutting incremental capex.



#### Energy Storage Ready

Integrates seamlessly with White Lion's 2-20 MW sodium-ion battery systems for load leveling and off-grid operation.



#### Distillation Sync

The distillation system sized for continuous diesel production.

### DISTRIBUTOR INFORMATION

PLACE DISTRIBUTOR INFORMATION HERE