

**TORO**

# Greensmaster® eTriFlex™

ELECTRIC RIDING GREENSMOWERS

## FEATURES

### All-Electric Traction, Steering, Lift & Reel Control

– No onboard hydraulic fluid

#### eTriFlex Models:

- **Engine/Generator Model**, 14 hp (10.4 kW) twin-cylinder Kawasaki® with Battery Assist Technology and up to 20% fuel savings.\* Constant 2,400 rpm and shrouded engine for **amazingly quiet operation**
- **Lithium-Ion Battery Model**, 48-Volt Samsung® with **virtually silent operation**

### Radius Dependent Speed (RDS) System for Optimal Perimeter Cut ★

- **Clip Rate:** Maintains consistent cutting unit clip rate in turns on each individual reel
- **Wheel Speed Control:** Individual wheel speed control during turns for reduced wheel scrubbing
- **Lift-In-Turn:** Feature that provides a level cut from side to side, particularly in turns

### Advanced Cutting Performance

- Double A-Arm ★ plus Link-System Suspension for superior contour-following
- Industry-leading Flex™ technology and DPA cutting units for easy adjustment and precision ★
- Lift-In-Turn feature combined with RDS provide a consistent cleanup cut ★
- Enhanced clippings capture system for improved turf health
- Automatically produces an even cut line across all reels when raising or lowering cutting units
- Ample power for accessories\*

### Highly Productive and Versatile

- Ample power for a wide range of applications both on and off the greens
- Robust 10 mph transport speed with built-in "Slow-in-Turn" feature ★
- Auto-Brake on Operator Dismount
- Foot Operated Parking Brake

### Innovative Maintenance Enhancements

- InfoCenter™ with Advanced Diagnostics
- Tool-Free, Quick-Change cutting units ★
- Lift-Gate Footrest for easy access to the center cutting unit ★
- Large, balloon-style tires that are gentle on turf

## A new all-electric rider, charged with greens perfection.

The new Greensmaster eTriFlex models carry no hydraulic fluid and utilize all-electric components for traction, steering, lift and cutting. These EnergySmart® models are operationally-friendly with noticeable noise reductions, operational cost savings, and other meaningful improvements to complement the ever-important enhancements in cutting performance.

Combining the innovative, Double A-Arm Suspension System with industry-leading Flex technology, the cutting units float freely over any terrain. The new Radius Dependent Speed (RDS™) System, in combination with the Lift-In-Turn cutting unit leveling feature virtually eliminates the effect known as "Triplex-Ring". This substantially improves both the aesthetics and playability of the green.

And superior cutting performance is only the beginning.

The patented Lift-Gate Footrest, Tool-Free QuickChange™ cutting units, Automatic "Slow-in-Turn" during Transport and Auto-Brake on Operator Dismount are just a few of the many new features that provide added versatility, simplified service, and ultimately, more productivity.

[toro.com/etriflex](http://toro.com/etriflex)



EdgeSeries™ Reels

★ Patented or Patent-Pending

Call your Toro distributor at 800-803-8676

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\*Verticutting with the Engine/Generator model only.



# Greensmaster® eTriFlex™ 3360/3370 Specifications\*

	GREENSMASER eTRIFLEX 3360, MODEL 04580 (ENGINE/GENERATOR)	GREENSMASER eTRIFLEX 3370, MODEL 04590 (LITHIUM-ION BATTERY)
<b>POWER SOURCE</b>	Engine: Kawasaki 14.5 HP (10.8 kW) @3600 rpm, gasoline, air-cooled, twin-cylinder, governed to 2400 rpm, displacement 36.8 cu-inch (603cc). Choke standard. Generator: 48V 5400W air cooled brushless permanent magnet motor in parallel with four 12V 33AH AGM batteries (connected in series). Generator is used to start engine	Eight, Lithium-Ion Samsung® SDI batteries
<b>ENERGY CAPACITY</b>	4.9 gallons (18.5 liter) gasoline	10.77 kWh; 48V nominal
<b>ELECTRICAL SYSTEMS</b>	48V System for traction motor circuit, steering motor circuit, cutting unit motor circuit and lift / lower actuator circuit. 12V system for primary controls and brake actuator.	
<b>DIAGNOSTICS</b>	Basic machine diagnostics available through the InfoCenter™	
<b>POWER STEERING</b>	48V electric steering motor with torque feedback device	
<b>TRACTION DRIVE</b>	Positive 2WD traction drive: Two, brushless permanent magnet traction motors coupled to a gearbox. Optional 3WD. (patent-pending).	
<b>RDS™ SYSTEM</b>	<b>Radius Dependent Speeds</b> – Clip Rate: Maintains consistent cutting unit clip rate in turns on each individual reel (patent-pending). Wheel Speed Control: Individual wheel speed control during turns (patent-pending). Lift-In-Turn: Provides level cut from side to side of cutting units regardless of turning angle (patented).	
<b>GROUND SPEED</b>	Mowing 0-5 mph (0-8 km/h); Transport 0-10 mph (0-16 km/h); Reverse 0-3 mph (0-4.8 km/h). Selective slow down feature for turning in mowing mode. Automatic slow down at high transport speeds when turning.	
<b>CUTTING UNIT DRIVE</b>	Three, 48V (1.1 KW), air-cooled brushless permanent magnet motors.	
<b>CUTTING UNIT LIFT SYSTEM</b>	48V electric linear actuators with fully integrated brushless permanent magnet motor and controller. Fully sealed with splash guard. Center lift actuator drop and raise delay is dependent on machine velocity.	
<b>VERTICUTTING</b>	Yes	No
<b>BACKLAPPING</b>	Adjustable from 200–520 RPM	
<b>CONTROLS</b>	Traction Pedal: Forward/Neutral/Reverse; Joystick: Raise/Lower; Function control switch: Neutral, Mow, Transport; Key switch; Steering Arm Lock Pedal; Brake pedal; Parking Brake; InfoCenter; Seat Adjusting Lever; Main Power Connectors; Choke (3360 only); Fuel-Shutoff Valve	
<b>INFOCENTER™</b>	InfoCenter: Onboard LCD display shows gauges, alerts/faults, service reminders, electrical system diagnostics, low oil pressure, alternator, engine hours, engine rpm, voltage, functional control status, parking brake applied, reel speed setting, backlap control, clip control, calibration of 48V components.	
<b>DIAGNOSTICS</b>	Basic machine diagnostics available through the InfoCenter.	
<b>BRAKES</b>	Traction motor regenerative braking; foot pedal service/parking brake, linear-actuated automatic parking brake.	
<b>TIRES/WHEELS/PRESSURES</b>	Three, 19x10.5x8, 4-ply rating pneumatic tubeless and demountable. Smooth tread. Tire pressure 12–16 psi (83–110 kPa) front and rear.	
<b>WEIGHT, 11-BLADE CU, BASKETS, AND STANDARD SEAT, NO FUEL</b>	Mow: 1,354 lbs (614 kg) Transport: 1,625 lbs (737 kg)	Mow: 1,359 lbs (616 kg) Transport: 1,628 lbs (738 kg)
<b>NOISE LEVEL (DBA)</b>	Sound Power: 91 db(A) Operator Ear: 73 db(A) Bystander: 25ft – 78 db(A), 50ft – 73 db(A), 100ft – 66 db(A)	Sound Power: 82 db(A) Operator Ear: 66 db(A)
<b>GROUND CLEARANCE</b>	3.8" (9.7cm) ground clearance. Three, tie down locations (2 side, 1 rear).	
<b>WIDTH OF CUT</b>	59" (150cm)	
<b>CUTTING UNIT SUSPENSION</b>	Double A-Arm Suspension utilizing sealed ball joints allows free cutting unit motion in pitch and yaw. Links system for the roll. The basket is directly mounted to the cutting unit displacing weight evenly over front and rear rollers. (patented)	
<b>QUICK-CONNECT CUTTING UNITS</b>	Snap-on cutting unit and reel motors (no tools required).	
<b>OPTIONAL ATTACHMENTS</b>	8, 11, or 14-blade Cutting Units, Groomers, Rear Roller Brushes, Anti-Bobbing, Light Kit, Variety of Front Rollers, Thatching Reels, Tri-Roller, Spiker, Bobbing Kit, Standard or Premium Seat, Wireless Hour Meter, Bimini Shade, Bag Kit, Spark Arrestor.	
<b>MAINTENANCE</b>	No grease points	
<b>OVERALL DIMENSIONS</b>	Width: 70.9" (180cm) Length: with Baskets 98" (249cm) Height: 80.8" (205cm) Wheelbase: 49.8" (126.5cm) Minimum Turning Radius (to machine center line): 35.9" (91cm)	
<b>CERTIFICATION</b>	Meets ANSI B71.5–2017 and EU 2000. 14EC (noise), 2006/42/EC (machinery safety), 2014/53/EU (red)	
<b>WARRANTY</b>	Two-year limited warranty, both models. Lithium-Ion battery 4 years (3rd and 4th year prorated). Refer to the Operator's Manual for further details.	

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# Greensmaster® eTriFlex™ 3360/3370 Accessories\*

	8-BLADE DPA CUTTING UNITS	11-BLADE DPA CUTTING UNITS	14-BLADE CUTTING UNITS
<b>DPA CUTTING UNITS</b>	TriFlex® cutting units will fit on the Greensmaster eTriFlex Series.		
<b>HEIGHT OF CUT (HOC) RANGE</b>	Cutting height is adjusted on front roller by two vertical screws and held by two locking cap screws. Bench HOC range is .062"-.297" (1.6-7.5 mm). With high HOC kit, range is .297-1.0" (7.5-25.4 mm). Effective HOC may vary depending on turf conditions and bedknife installed.		
<b>REEL WELDMENT</b>	Reels are 5" (13 cm) in diameter, 21" (53.3 cm) in length. <b>EdgeSeries™</b> Reels blades are welded to 5 stamped steel spiders, and heat treated. The reel is ground for diameter and concentricity, and relief grind.		
<b>REEL BEARINGS</b>	Two stainless steel ball bearings, 30 mm inside diameter slip fit onto reel shaft retained by internally splined threaded insert. Low drag seals/slingers for added protection with o-ring sealed motor and counterweight. Reel position maintained by a wave washer with no adjusting nut.		
<b>MAINTENANCE</b>	No grease zerks, sealed bearing design eliminates daily maintenance.		
<b>REEL DRIVE</b>	The reel weldment shaft is a 1.375" (35 mm) diameter tube with internally splined threaded insert.		
<b>FRAME</b>	Precision machined, die-cast aluminum cross member with two bolt-on die-cast aluminum side plates.		
<b>AGGRESSIVENESS</b>	Aggressiveness stays constant throughout the life of the reel. Adjustable, with new roller spacers. Patented design.		
<b>BEDKNIFE</b>	Replaceable single edged, EdgeMax™ Microcut Bedknife is standard on all cutting units.		
<b>BEDKNIFE ADJUSTMENT</b>	Dual screw, indexed "click" adjustment to the reel; detents correspond to .0007" (.018 mm) bedknife movement for each position.		
<b>FRONT &amp; REAR ROLLERS</b>	Front: Not included with cutting unit, purchased separately. Option between full, narrow-spaced and wide-spaced Wiehle roller. Rear: Steel full, 2" (5.1 cm) diameter with sealed bearings and through-shaft.		
<b>GRASS SHIELD</b>	Non-adjustable shield with adjustable cut-off bar to improve grass discharge from reel in wet conditions.		
<b>TOTAL WEIGHT</b>	8-blade: 80 lbs. (30.4 kg) with aluminum Wiehle Roller. 11-blade: 83 lbs. (37.7 kg) with aluminum Wiehle Roller. 14-blade: 86 lbs. (39 kg) with aluminum Wiehle Roller.		

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## GREENSMaster ETRIFLEX ACCESSORIES

TRIFLEX TRACTION UNIT ACCESSORIES	
04503	3WD Kit
04500	Light Kit
04508	Seat Kit, Standard
04729	Seat Kit, Premium
121-3660	Left Armrest Kit - Standard
119-7105	Armrest Kit - Premium
137-8098	Spark Arrestor Kit (Gas)
115-4510	Canopy
137-8130	Utility Bag Kit
115-4754	Wireless Hour Meter

OPTIONAL TRIFLEX ACCESSORIES	
04720	Thatching Reel - TriFlex (set of 1) for model 04580 only
119-1128	Individual dynaBLADE, 2mm thickness
117-6824	Individual dynaBLADE, 1.2mm thickness
117-6839	Replacement dynaBLADE kit, 1.2mm thickness (36 blades)
117-6840	Replacement dynaBLADE kit, 2mm thickness (36 blades)
121-6674	Individual Spring Steel Blade
121-6675	Replacement Spring Steel Blade Kit (36 pcs)
04722	Greens Tri-Roller - TriFlex (set of 1)
04723	Greens Spiker - TriFlex (set of 1)

TRIFLEX DPA CUTTING UNITS	
04651	8-Blade Cutting Unit
04653	11-Blade Cutting Unit
04655	14-Blade Cutting Unit

TRIFLEX DPA CUTTING UNIT ROLLERS	
04625	Full Roller DPA
04626	Narrow Wiehle Roller DPA
04627	Wide Wiehle Roller DPA
04258	Extended Wiehle Roller
04267	Narrow Wiehle Roller (for paspalum)
04249	Full Split Roller
04250	Wiehle Split Roller
04628	Solid Steel Roller Kit (Front Wide Wiehle, Rear Full)
04716	Anti Bobbing Kit
71-1550	2" Rear Wiehle Roller (cast iron)
125-5180	Rear Roller Extension Kit
120-9600	High Height of Cut Kit (.35 - .94)

TRIFLEX DPA CUTTING UNIT ROLLER SCRAPERS / BRUSHES / COMBS	
04646	Rear Roller Scraper (Spring Loaded)
125-3503	Front Wiehle Roller Scraper - Narrow
125-3504	Front Wiehle Roller Scraper - Wide
125-3505	Front Roller Scraper - Full
115-7377	Front Wiehle Roller Scraper Brush - Narrow
115-7378	Front Wiehle Roller Scraper Brush - Wide
115-7379	Front Roller Scraper Brush - Full
115-7380	Front Wiehle Roller Scraper Comb - Narrow
115-7381	Front Wiehle Roller Scraper Comb - Wide
115-7382	Front Roller Scraper Comb - Full
107-9561	Anti Bobbing Roller - Scraper Kit (Front and Rear)
121-2260	Rear Roller Scraper - Adjustable

TRIFLEX DPA CUTTING UNIT ACCESSORIES	
04648	Universal Groomer Drive
04802	Groomer Reel - Twin Tipped
04270	Grooming Brush, Soft
04271	Grooming Brush, Stiff
04650	Rotating Rear Roller Brush
115-1880	EdgeMax™ Microcut Bedknife
115-1881	EdgeMax™ Tournament Bedknife
93-4262	Microcut Bedknife (HOC Range 1.58mm - 3.18mm)
93-4263	Tournament Bedknife (HOC Range 3.2mm - 6.35mm)
93-4264	Low Cut Bedknife (HOC Range 6.35mm and higher)
94-6392	Bedknife - High Cut
108-4303	Extended Microcut Bedknife
108-4302	Extended Tournament Bedknife
63-8600	Bedknife - Fairway
99-3794-03	DPA Bedbar, Aggressive (optional)
106-2648-01	DPA Bedbar, Less Aggressive (standard equipment)
112-7475	EdgeMax™ Fairway Bedknife

TOOLS	
04399	Turf Evaluator
125-5610	Paper - Reel
125-5611	Shim - Reel
94-9010	Height of Cut Bar Assembly

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