

**TORO**

# Greensmaster® eTriFlex™

Electric riding greens mowers

## A NEW ALL-ELECTRIC RIDER, CHARGED WITH GREENS PERFECTION.

The new Greensmaster eTriFlex models carry no hydraulic fluid and utilise all-electric components for traction, steering, lift and reel drive. 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 even the most difficult terrain. The new Radius Dependent Speed (RDS™) system, in combination with the lift-in-turn cutting unit levelling 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” 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.



EdgeSeries™ reels

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

### F E A T U R E S

#### All-electric traction, steering, lift and reel drive

- No on-board hydraulic fluid

#### eTriFlex models:

- Engine/generator model, 10.8 kW (14.5 hp) 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 system 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 regardless of machine speed or turn angle

- Wheel speed control: Individual wheel speed control during turns for reduced wheel scrubbing

#### 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 together provide a consistent clean-up 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 mowing applications
- 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 centre cutting unit ★
- Large, balloon-style tyres provide a gentle footprint on even the most delicate turf

#### ★ Patented or patent-pending

\*Verticutting with the engine/generator model only.

	GREENSMaster eTRIFLEX 3360, MODEL 04580 (ENGINE/GENERATOR)	GREENSMaster eTRIFLEX 3370, MODEL 04591 (LITHIUM-ION BATTERY)
<b>POWER SOURCE</b>	Engine: Kawasaki 10.8 kW (14.5 hp) @ 3,600 rpm, petrol, air-cooled, twin-cylinder, governed to 2,400 rpm, displacement 603 cc (36.8 inch <sup>3</sup> ). Choke standard. Generator: 48 V 5400 W air-cooled brushless permanent magnet motor in parallel with four 12 V 33 Ah AGM batteries (connected in series). Generator is used to start engine	High-capacity lithium-ion batteries with integrated Battery Management System (BMS)
<b>ENERGY CAPACITY</b>	18.5 l petrol	10.8 kW; 48 V nominal
<b>ELECTRICAL SYSTEMS</b>	48 V system for traction motor circuit, steering motor circuit, cutting unit motor circuit and lift/lower actuator circuit. 12 V system for primary controls and brake actuator.	
<b>CHARGER</b>	Off-board high efficiency 1200 W smart charger. •AC input voltage 100–240 VAC •AC input frequency 50/60 Hz •Max. input current 14.5 A •Max. charge time, empty to full: 9 hr.	
<b>DIAGNOSTICS</b>	Advanced machine diagnostics available through the InfoCenter™	
<b>POWER STEERING</b>	48 V 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).	
<b>GROUND SPEED</b>	Mowing 0-5 mph; Transport 0-10 mph; Reverse 0-5 mph. Selective slow-down feature for turning in mowing mode. Automatic slow-down at high transport speeds when turning.	
<b>CUTTING UNIT DRIVE</b>	Three, 48 V (1.1 kW), air-cooled brushless permanent magnet motors.	
<b>CUTTING UNIT LIFT SYSTEM</b>	48 V electric linear actuators with fully integrated brushless permanent magnet motor and controller. Fully sealed with splash guard. Centre lift actuator drop-and-raise delay is dependent on machine velocity.	
<b>VERTICUTTING</b>	Yes	No
<b>BACKLAPPING</b>	Standard, on-board and adjustable speed 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 shut-off valve (3360 only)	
<b>INFOCENTER™</b>	InfoCenter: On-board 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 status, reel speed setting, backlap control, clip control, calibration of 48 V components.	
<b>DIAGNOSTICS</b>	Advanced machine diagnostics available through the InfoCenter.	
<b>BRAKES</b>	Traction motor regenerative braking; foot pedal service/parking brake, linear-actuated automatic parking brake.	
<b>TYRES/WHEELS/PRESSURES</b>	Three, 19 x 10.5-8, 4-ply rating, pneumatic tubeless and demountable. Smooth tread. Tyre pressure 83–110 kPa (12–16 psi) front and rear.	
<b>WEIGHT, 11-BLADE CUTTING UNIT, BASKETS AND STANDARD SEAT, NO FUEL</b>	Mow: 614 kg (1,354 lb) Transport: 737 kg (1,625 lb)	Mow: 578 kg (1,274 lb) Transport: 706 kg (1,557 lb)
<b>NOISE LEVEL (DBA)</b>	Sound power: 91 dB(A) Operator ear: 73 dB(A) Bystander: 25–78 dB(A), 50–73 dB(A), 100–66 dB(A)	Sound power: 82 dB(A) Operator ear: 66 dB(A) Bystander: 25–56 dB(A), 50–50 dB(A), 100–44 dB(A)
<b>GROUND CLEARANCE</b>	9.7 cm (3.8") ground clearance. Three, tie-down locations (two side, one rear).	
<b>WIDTH OF CUT</b>	150 cm (59")	
<b>CUTTING UNIT SUSPENSION</b>	Double A-arm suspension utilising sealed ball joints allows for 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). Lift in turn: Provides a level cut from side to side of cutting units regardless of turning angle (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: 180 cm (70.9") Length: with baskets 249 cm (98") Height: 205 cm (80.8") Wheelbase: 126.5 cm (49.8") Minimum turning radius (to machine centreline): 91 cm (35.9")	
<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 warranty, both models. Lithium-ion battery 4 years. Refer to the Operator's Manual for further details.	

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	8-BLADE DPA CUTTING UNITS	11-BLADE DPA CUTTING UNITS	14-BLADE CUTTING UNITS
<b>DPA CUTTING UNITS</b>	Patented design allowing reel/bedknife behind centreline aggressiveness to remain constant throughout the service life of the reel.		
<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 1.6–7.5 mm (0.062”–0.297”). With high HOC kit, range is 7.5–25.4 mm (0.297”–1.0”). Effective HOC may vary depending on turf conditions and bedknife installed.		
<b>REEL WELDMENT</b>	Reels are 13 cm (5”) in diameter, 53.3 cm (21”) in length. <b>EdgeSeries™</b> reel blades are welded to five 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 (1.18”) 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 35 mm (1.375”) diameter tube with internally splined threaded insert.		
<b>FRAME</b>	Precision-machined, die-cast aluminium cross member with two bolt-on, die-cast aluminium side plates.		
<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 corresponding to 0.018 mm (0.0007”) bedknife movement for each position.		
<b>FRONT AND REAR ROLLERS</b>	Front: Not included with cutting unit, purchased separately. Option between full, narrow-spaced and wide-spaced Wiehle roller. Rear: Steel full, 5.1 cm (2”) 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: 36.3 kg (80 lb) with aluminium Wiehle roller. 11-blade: 37.7 kg (83 lb) with aluminium Wiehle roller. 14-blade: 39 kg (86 lb) with aluminium Wiehle roller.		

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eTRIFLEX TRACTION UNIT ACCESSORIES	
04503	3WD kit
04500	Light kit
137-7947	Light kit, front mount brackets
137-7945	Rear 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)
138-8579	Canopy
137-8130	Utility bag kit
115-4754	Wireless hour meter
133-1308	Seat cover

OPTIONAL eTRIFLEX ACCESSORIES	
04716	Off-greens kit (anti-bobbing)
04720	Thatching reel – TriFlex (set of 1) for model 04580 only
119-1128	Individual dynaBLADE, 2 mm thickness
117-6824	Individual dynaBLADE, 1.2 mm thickness
117-6839	Replacement dynaBLADE kit, 1.2 mm thickness (36 blades)
117-6840	Replacement dynaBLADE kit, 2 mm 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)

eTRIFLEX DPA CUTTING UNITS	
04651	8-blade cutting unit
04653	11-blade cutting unit
04655	14-blade cutting unit

eTRIFLEX DPA CUTTING UNIT ROLLERS	
04257	Full roller DPA (set of 1)
04255	Narrow Wiehle roller DPA (set of 1)
04256	Wide Wiehle roller DPA (set of 1)
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	5 cm (2") rear Wiehle roller (cast iron)
125-5180	Rear roller extension kit
120-9600	High height-of-cut kit (0.35-0.94)

eTRIFLEX 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

eTRIFLEX 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 1.58–3.18 mm)
93-4263	Tournament bedknife (HOC range 3.2–6.35 mm)
93-4264	Low-cut bedknife (HOC range 6.35 mm 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
139-4320	EdgeMax short Microcut bedknife
139-4321	EdgeMax short Tournament bedknife

TOOLS	
04399	Turf evaluator
125-5610	Paper – Reel
140-5531	Shim – Reel
94-9010	Height-of-cut bar assembly

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Rev. 1/23

The Greensmaster® eTriFlex™ is manufactured in Tomah, WI ISO 9002 Certified Plant.



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