



LR50 VEV

Electric All-Terrain Litter Vacuum

Product Overview



July 2022



www.madvac.com

Technical specs are subject to change without prior notice



Applications

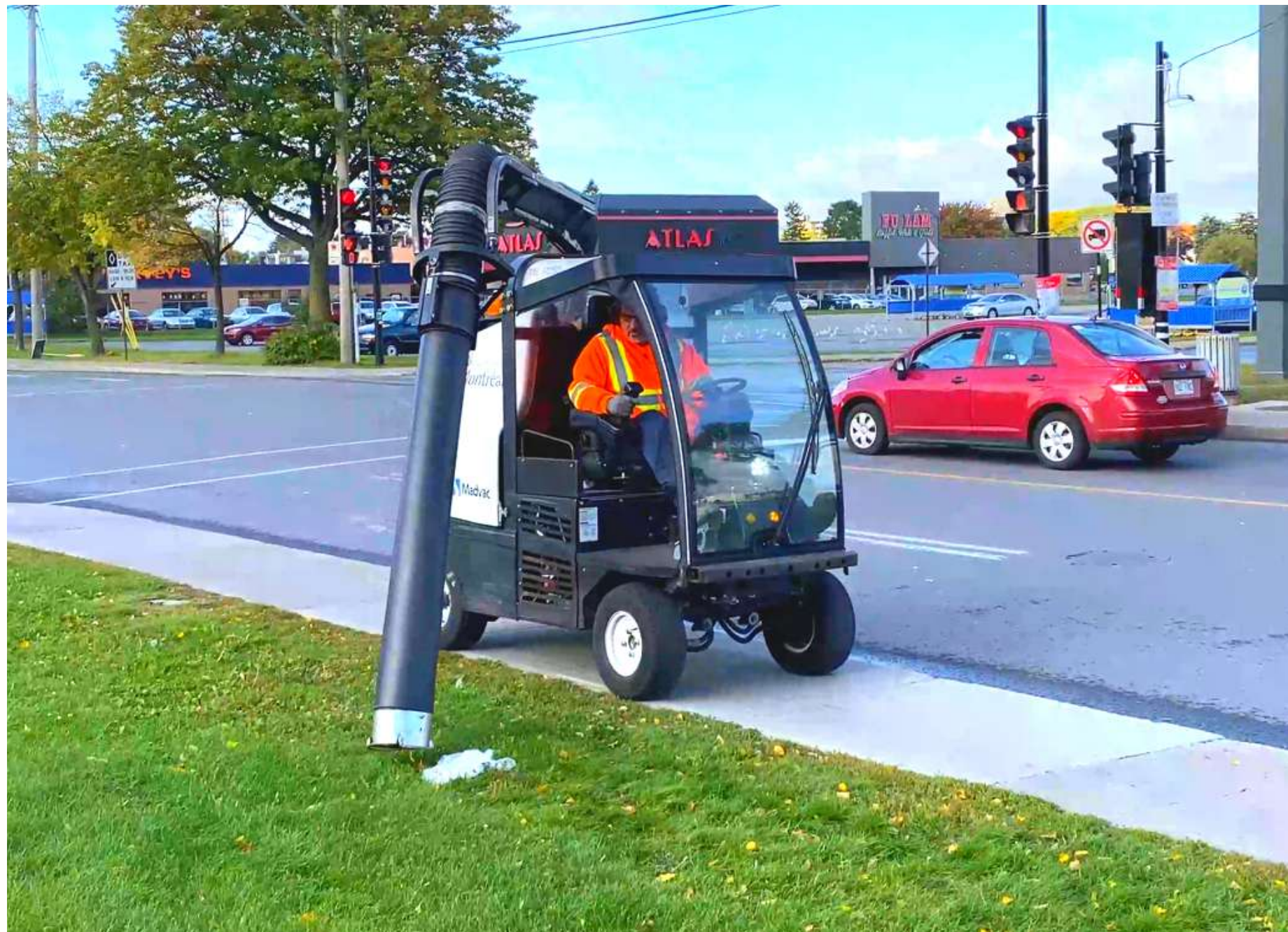
From concrete to grass, the electric LR50 can tackle all types of urban terrain with ease.

- Parks and grass areas
- Sidewalks
- Bike and pedestrian lanes
- Parking lots
- Curb side
- Alleys
- Pathways
- Alongside buildings





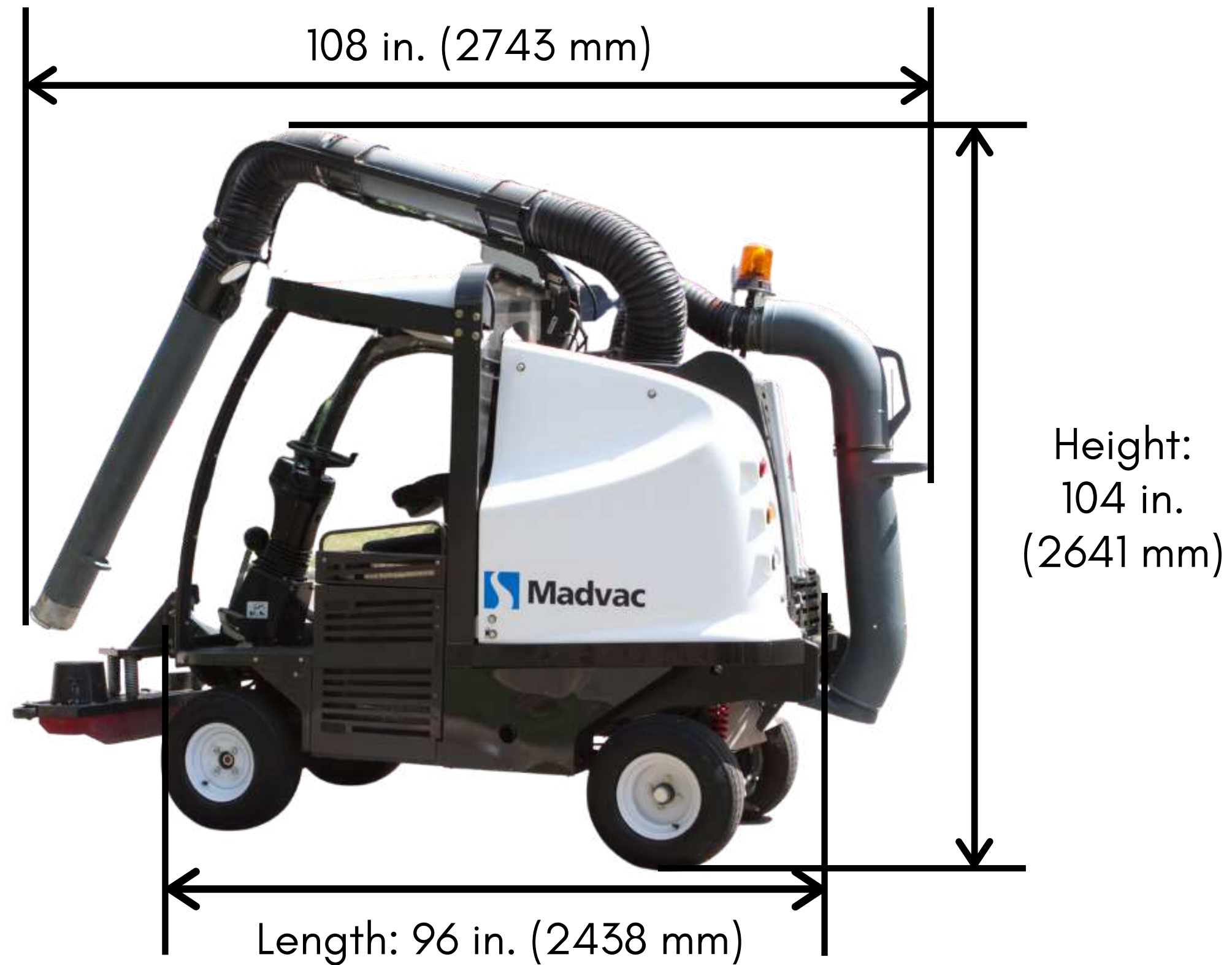
Customers



- Cities & municipalities
- Outdoor cleaning contractors
- Airports & seaports
- Transit authorities
- Healthcare services
- Distribution centers
- Shopping malls
- Educational & sports facilities
- Manufacturing facilities
- Amusement parks
- Casinos
- Military
- Correctional facilities



Dimensions





Ground Clearance & Wheelbase



- Ground clearance: 10 in. (254 mm)
- Wheelbase: 69 in. (1753 mm)



Weight



- Net/dry weight: 2692 lbs (1221 kg)
- Gross vehicle weight rating:
3270 lbs (1485 kg)
- Axle rating:
 - front 1980 lbs (898 kg)
 - rear 1980 lbs (898 kg)



Frame and Body



- Heavy gauge steel body on a welded 1/4 in. (6.35 mm) structural steel frame
- Electrostatic powder-coated paint





Cabin

- Cab size: 48 cu. ft. (1.36 cu. m.)
- Seating: 40.5 in. (1029 mm) above ground
- One seat with integral armrest, headrest, backrest
- Storage compartment
- Heated seat for operator comfort (optional)
- Grab-handle and cup holder
- One safety lap belt
- Fan for operator comfort (optional)





Cabin



Enclosed cab with heated or non-heated windshield and vinyl doors



Steering Wheel

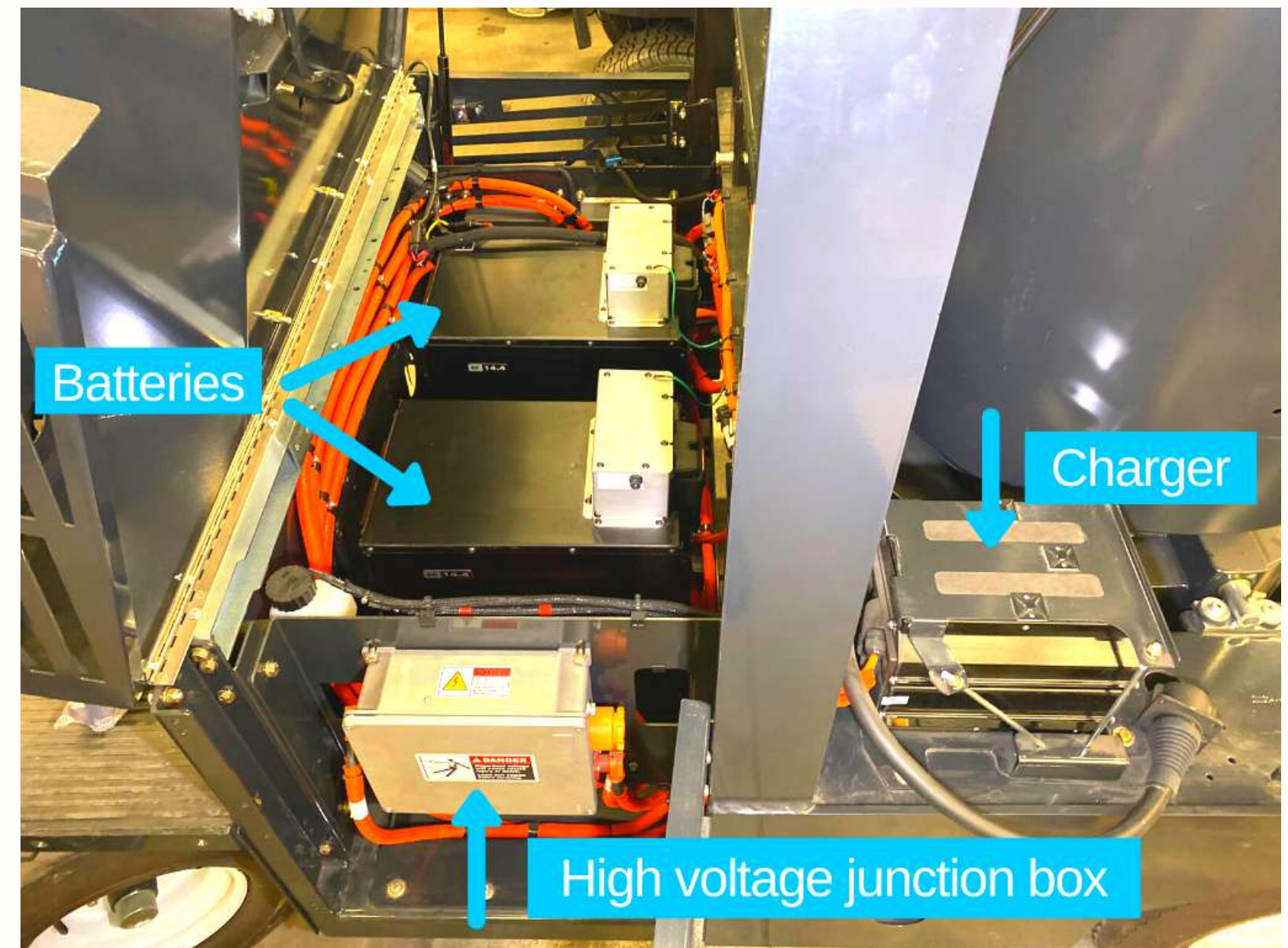


- Automotive-type steering wheel with steering ball for ease of handling
- Rocker switches (from left to right):
 - Heated seat / headlight
 - Washer fluid / hazard
 - Flasher
 - Beacon
 - Parking brake
 - Forward / neutral / reverse



Power

- Power pack: Lithium-Ion nickel manganese cobalt (Li NMC) high energy capacity, up to 28.8 kW/h (2 batteries)
- Voltage: 102 volts battery packs (2)
- Autonomy: up to 9 hours





Charger

- Charger: integrated chargers 6 kW on board
- Charger outlet: J1772 level 2, 240V/24A
- Charging time: 5 hours (15–18 hours if 120-v wall socket)
- Charging status on diagnostic screen



SAE charger J1772



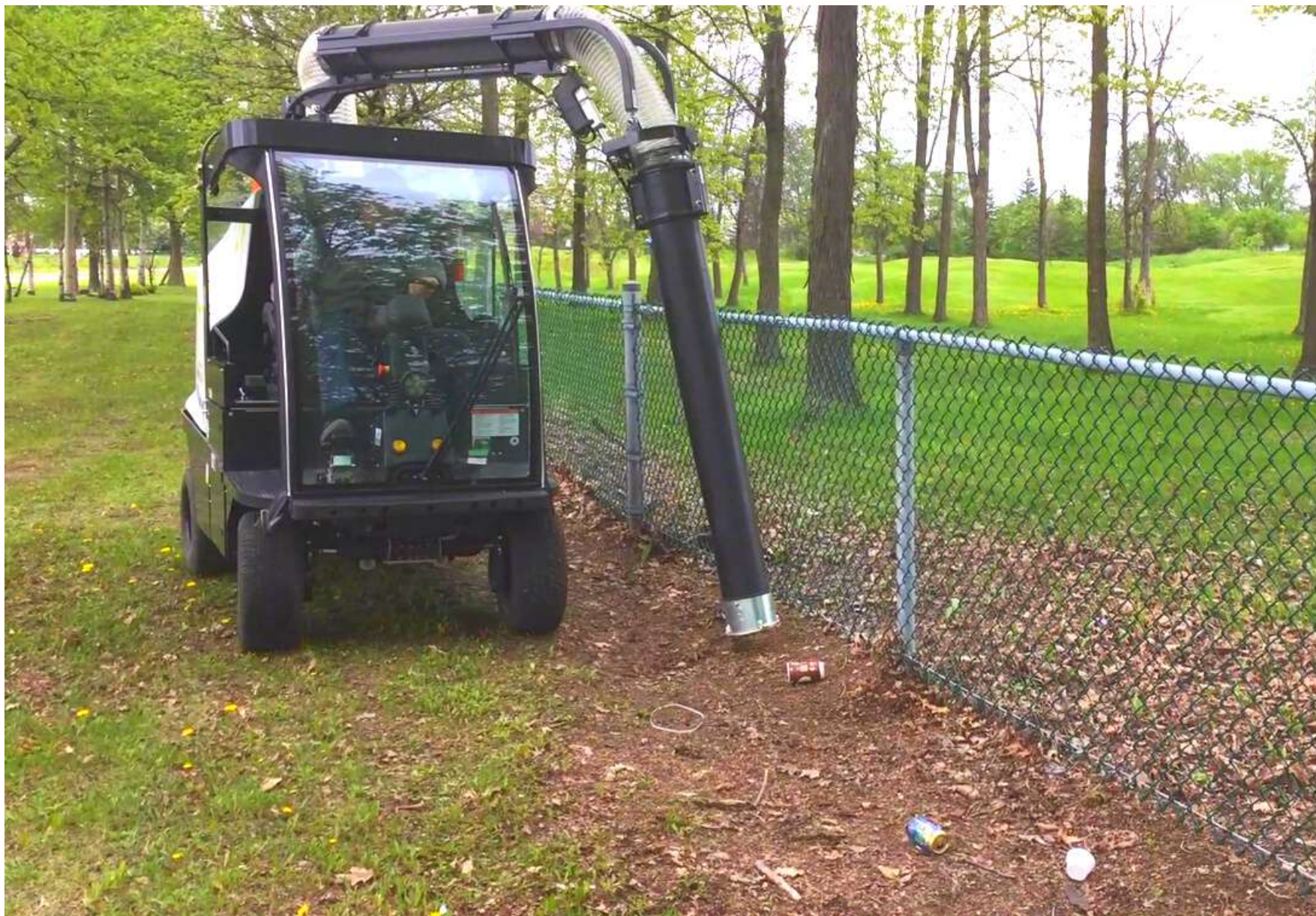
Zero ZF75-5 Motor

MOTOR:	ZF75-5
PEAK MOTOR TORQUE (FT-LB / N-M)	78 / 106
PEAK MOTOR HORSEPOWER (HP / KW)	46 / 34
PEAK MOTOR HORSEPOWER RPM	4300
PEAK EFFICIENCY	>94
MAX CONTINUOUS-RATED 30-MIN POWER (HP / KW)	21 /15.4
MAX OPERATING RPM	7500
MAX OPERATING TEMP (DEG C)	150
MIN OPERATING TEMP (DEG C)	-40
WEIGHT (LBS / KG)	33/15





General Machine Performance



- Max. forward speed: 12 mph (19 km/h)
- Max. reverse speed: 5 mph (8 km/h)
- Min. aisle turn: 180 in. (4572 mm)
- Internal turning radius: 60 in. (1524 mm)
- External turning radius: 90 in. (2286 mm)
- Cleaning speed:
up to 84,480 sq. ft. per hour
- Curb climbing: 7 in. (178 mm) tall
- Gradeability: 11.3 deg. (20%) with full & empty hopper



Instrument Panel

- Speed
- Hourmeter
- Energy recuperation
- Battery charge level
- Forward / reverse
- Power consumption and vacuum consumption
- Operator presence indicator
- Parking brake indicator
- Left / right signal indicator
- Hazard light switch
- Key ignition for starting and stopping the vehicle





Controls

- Steering: power assisted
- Propulsion: forward, neutral, reverse
push button shifter





Traction



- Drive: propulsion with 17 to 1 ratio
- Turf size (all 4 wheels)
- Regular: 20.5 x 8 x 10 in. /
520x203x254 mm (205/65-10)
- Turf MV17094: 20 x 8 x 10 in. /
508x203x254 mm (205/60-10)
- Tire load capacity: 1323 lbs / 600
kg per tire
- Brakes: drum service brakes with
magnetic parking brake



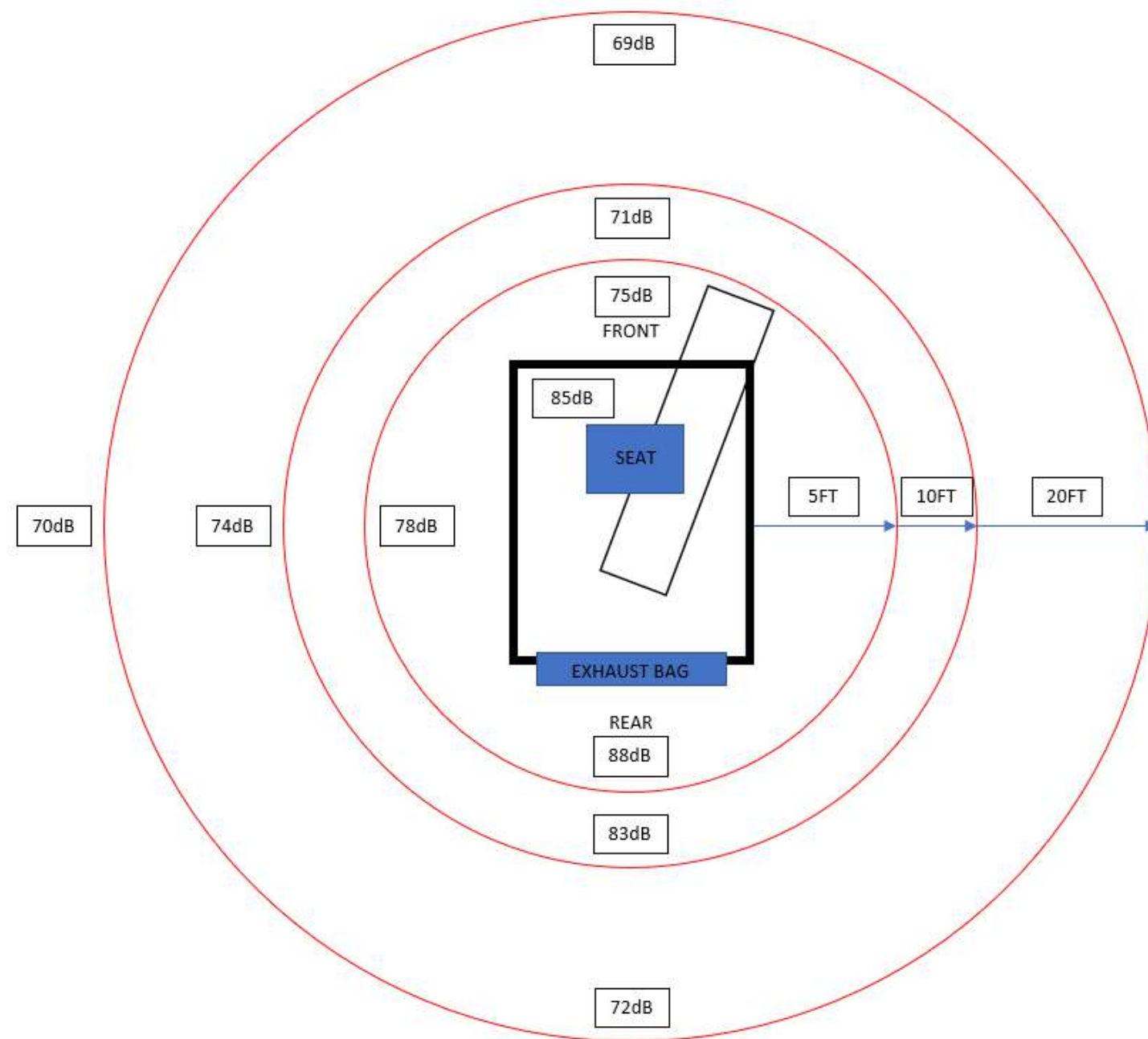
Suspension



- Front: leaf spring
- Rear: leaf spring



Noise Reduction



*dB rating 11.5% - 16.5%
lower than the LR50 diesel*



Front decibel

- Cabin: 85 dB
- 5 feet away: 75 dB
- 10 feet away: 71 dB



Lighting

- Strobe beacon
- LED headlight
- LED turn signals
- LED brake lights
- LED flashers
- LED backup lights
- License plate holder with light
- SMV emblem





Vacuum Fan and Suction System

- Vacuum passes through a fibrous bag and is collected inside the bag
- Vacuum rating: up to 1800 CFM
- Straight-through suction system compacts litter 2:1 ratio
- Vacuum fan diameter: 14 in. (365 mm)
- Vacuum fan position: bottom mounted
- No litter comes in contact with the fan





Vacuum Arm

- 270-degree arm movement with 24 sq.ft. (2.2 sq.m.) working area
- Diameter: 7 in. (178 mm)
- Right-side support for hose storage in transport mode





Vacuum Arm Control

- Robotic arm controlled by hydraulic proportional valves
- Ergonomic 6-position robotic joystick allows effortless displacement of the boom





Vacuum Hose Support Arm



For operator safety and easier displacement of the boom



Rear-View Vision



Two convex mirrors
mounted on each side of cab



Vacuum Head



- Optional for effortless vacuuming
- Width: 48 in. (1219 mm)
- 2 operating positions with one on each side of the vacuum head





Wander Hose



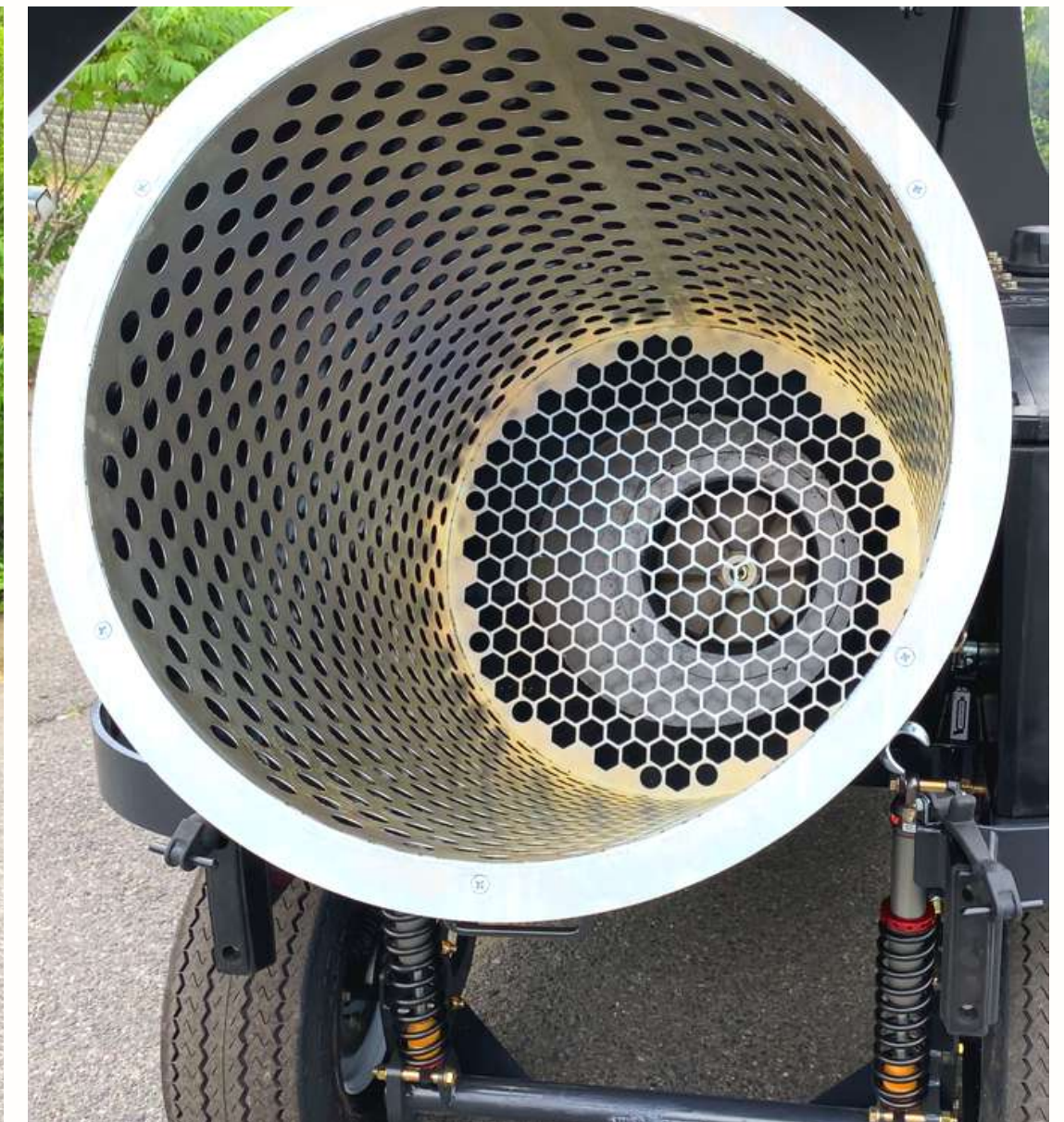
- Optional for confined, hard-to-reach areas
- Length: 15 ft. (4.57 m)
- Diameter: 6 in. (152 mm)





Litter Container and Bag

- 16-gauge powder-coated steel container
- Air cylinder power-assist tilt container
- Litter capacity
 - Volume: 75 gal. (284 L)
 - Weight: 150 lbs (68 kg)
- Bag size: 42 x 51 in. (1066 x 1295 mm)





Bagless Debris System: Kevlar Bin



Optional Kevlar bin can be filled, then emptied into off-the-shelf bag



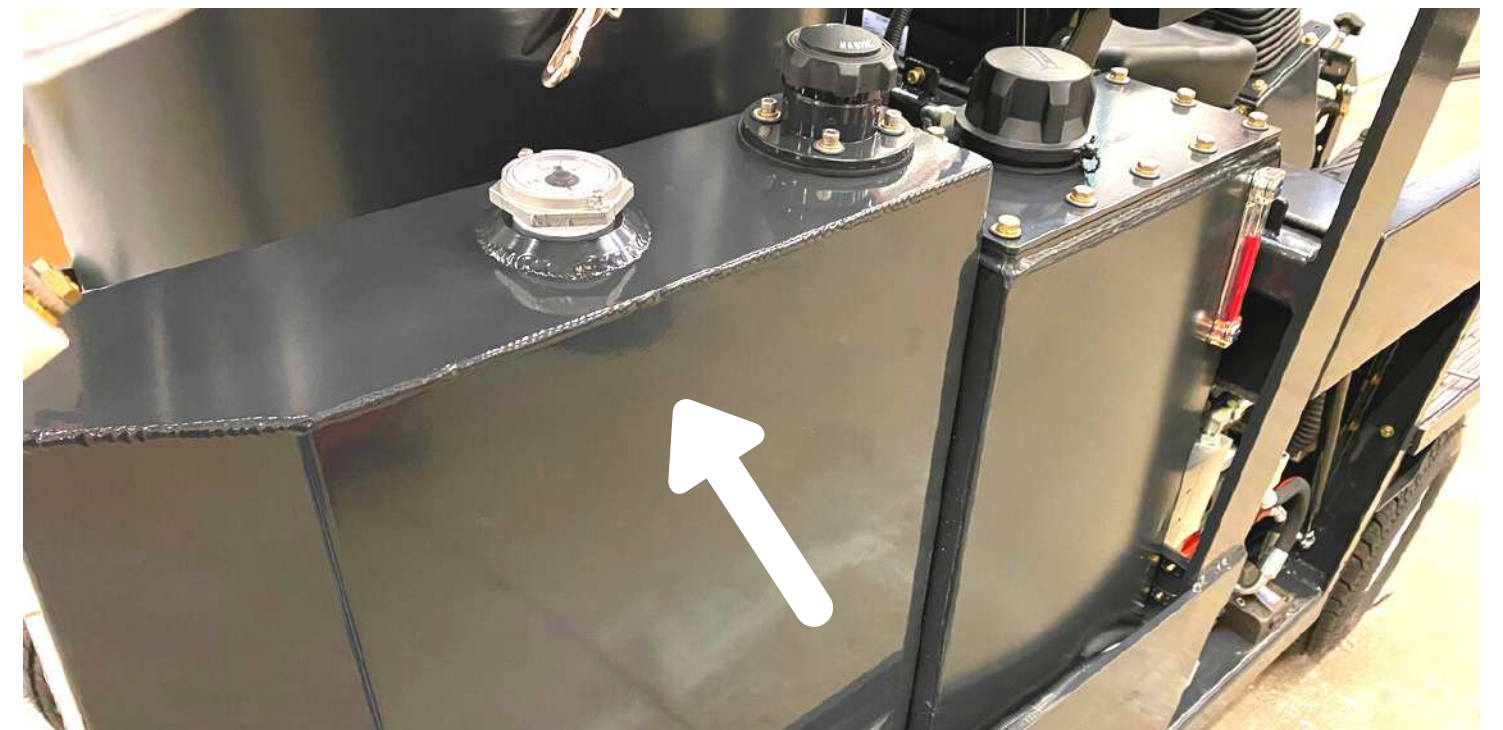
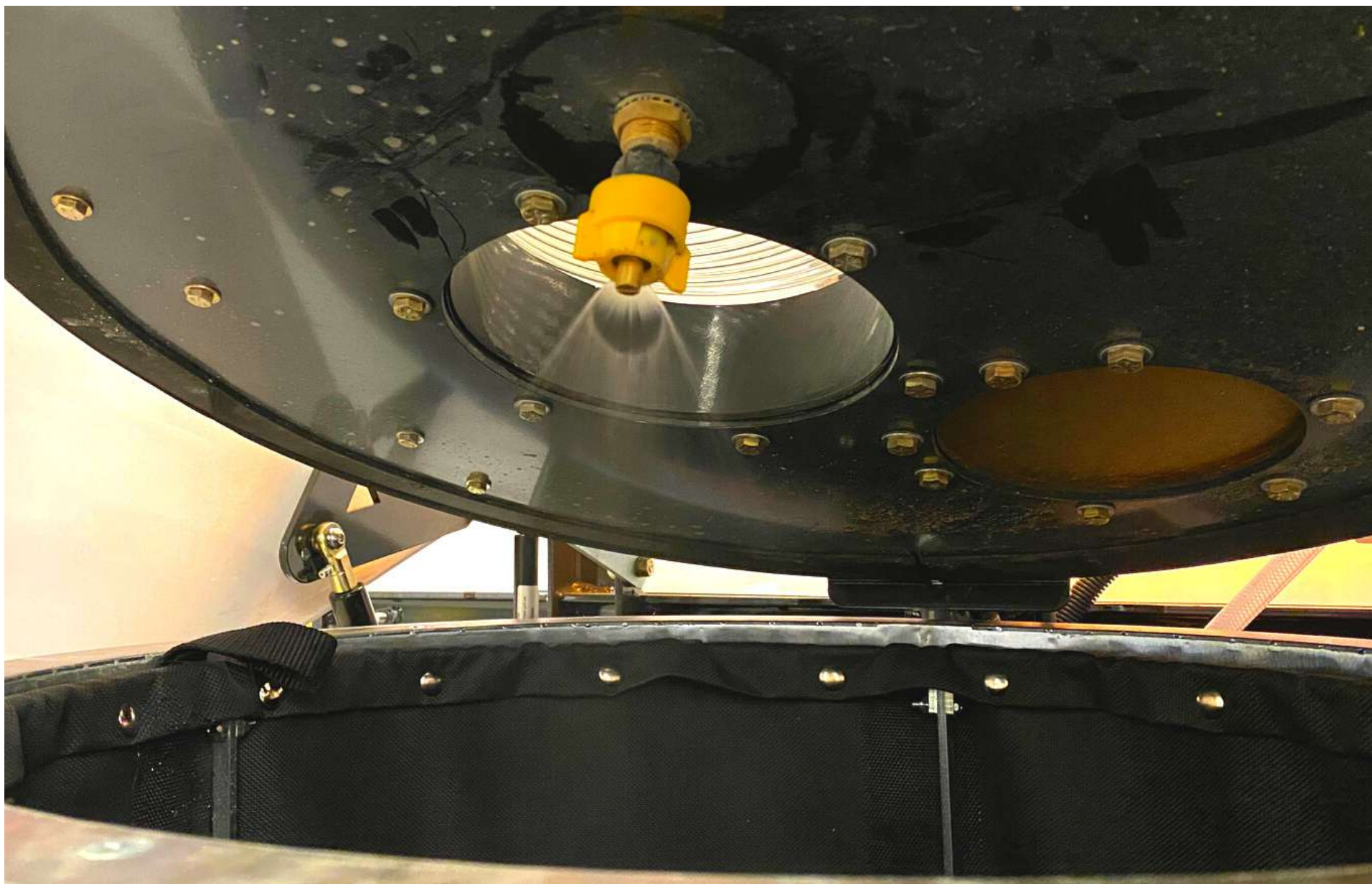
Dust Control - Exhaust Bag



Exhaust bag captures dust particles that can escape from the minute holes of the special Madvac collector bags or Kevlar bin



Dust Control - Water Mist



Optional intermittent water mist system with 10.17 gal. (38.5 L) water tank: controls dust and reduces risk of cigarette butt fire inside the container



Safety



R.O.P.S.
rollover protection system



Fire extinguisher (optional)
2.2 lbs (1 kg) dry powder



Emergency stop button



Rear-View Camera

Optional 7 in. (178 mm) rear-view camera system with TFT color monitor





Convenience



Foot step helps operator climb on board easily and safely



Foot activated horn gives operator more ease and convenience than pressing the turn signal lever



Broom and rake holder



Convenience



Tire flat proofing –
liquid sealant (optional)



Console accessory box with
USB / 12V aux outlet and switch
for optional water mist system



License plate holder



Convenience

Easy access to critical components of the machine

- Hinged power-assisted air cylinder tilt seat for access to battery compartment
- Hinged side door for HVJB (high voltage junction box) access



Contact

To schedule a demo, request a quote, or for more information on the LR50 electric all-terrain litter vacuum:



855-651-0444 (USA/Canada)
1-450-651-0444 (International)



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www.madvac.com



awarded contract vendor **#093021-EXP**