



# LN50 VEV<sup>+</sup>

Electric All-Terrain Litter Vacuum

## Product Overview



July 2022



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

Technical specs are subject to change without prior notice





# Applications

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From concrete to grass, the electric LN50 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

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- 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

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





# Weight



*218 lbs lighter than  
diesel model!*

- Net/dry weight: 2356 lbs (1069 kg)
- Gross vehicle weight rating:  
2940 lbs (1336 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



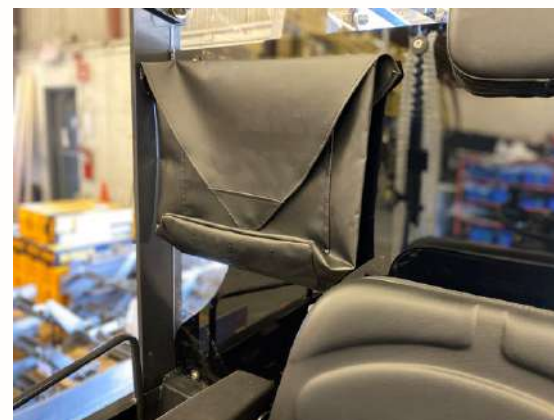




# Cabin

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







# Steering Wheel



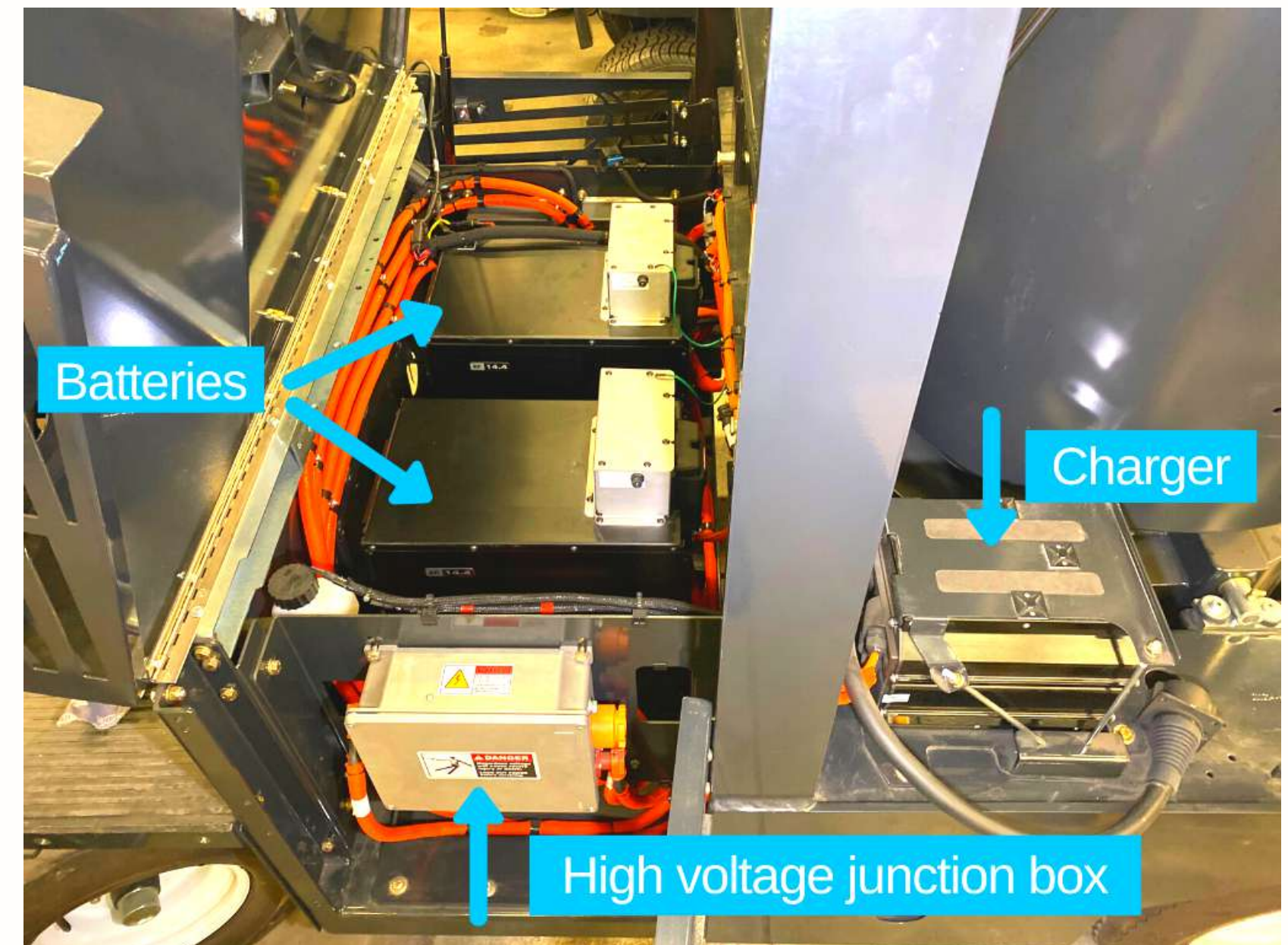
- Automotive-type steering wheel with steering ball for ease of handling
- Rocker switches (from left to right):
  - Heated seat / headlight
  - Washer fluid / hazard
  - Flasher
  - Beacon
  - Parking brake
  - Forward / neutral / reverse





# 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

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







# Controls

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- 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

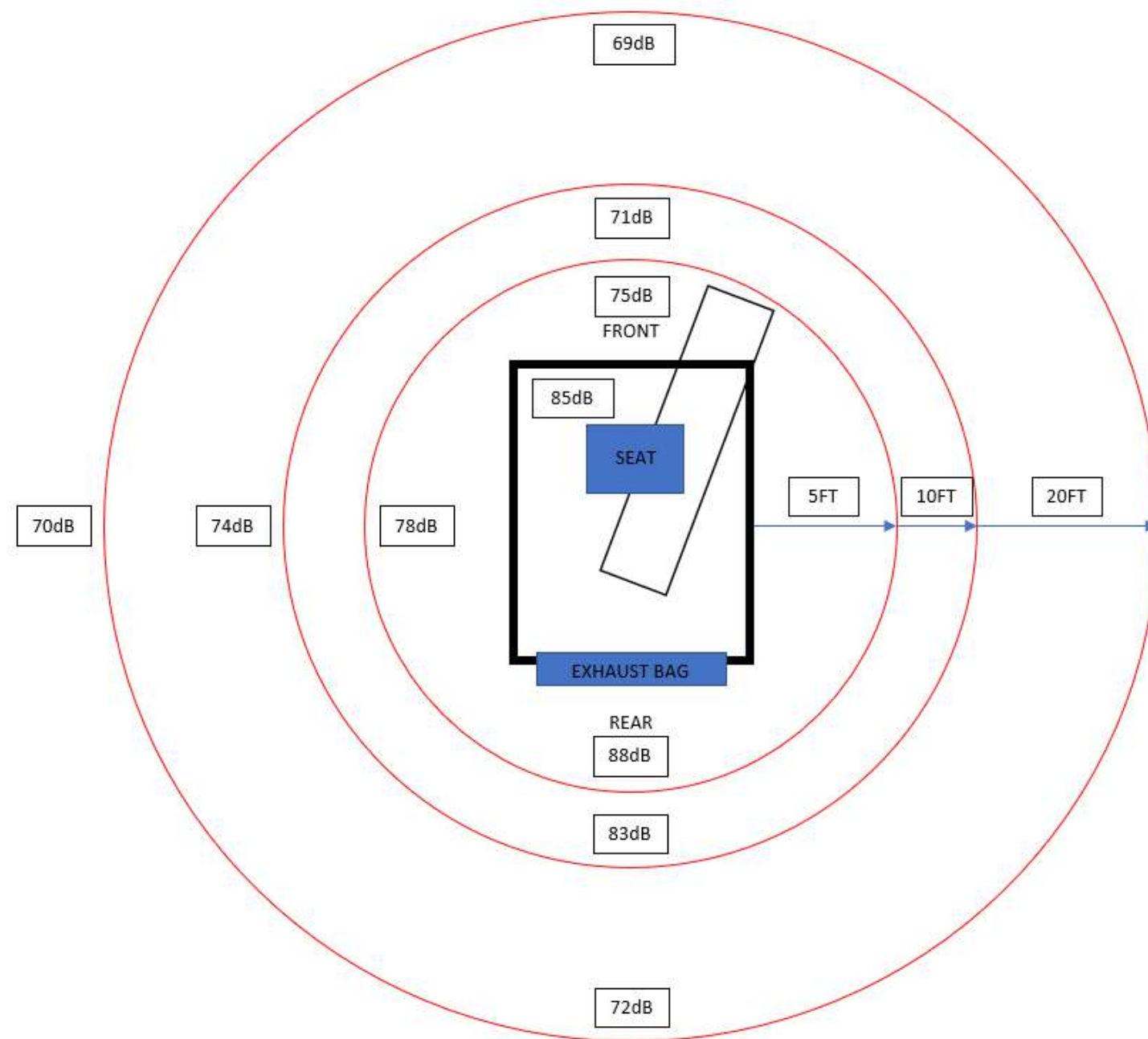


- Front: leaf spring
- Rear: leaf spring





# Noise Reduction



*dB rating 11.5% - 16.5%  
lower than the LN50 diesel*



Front decibel

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





# Lighting

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



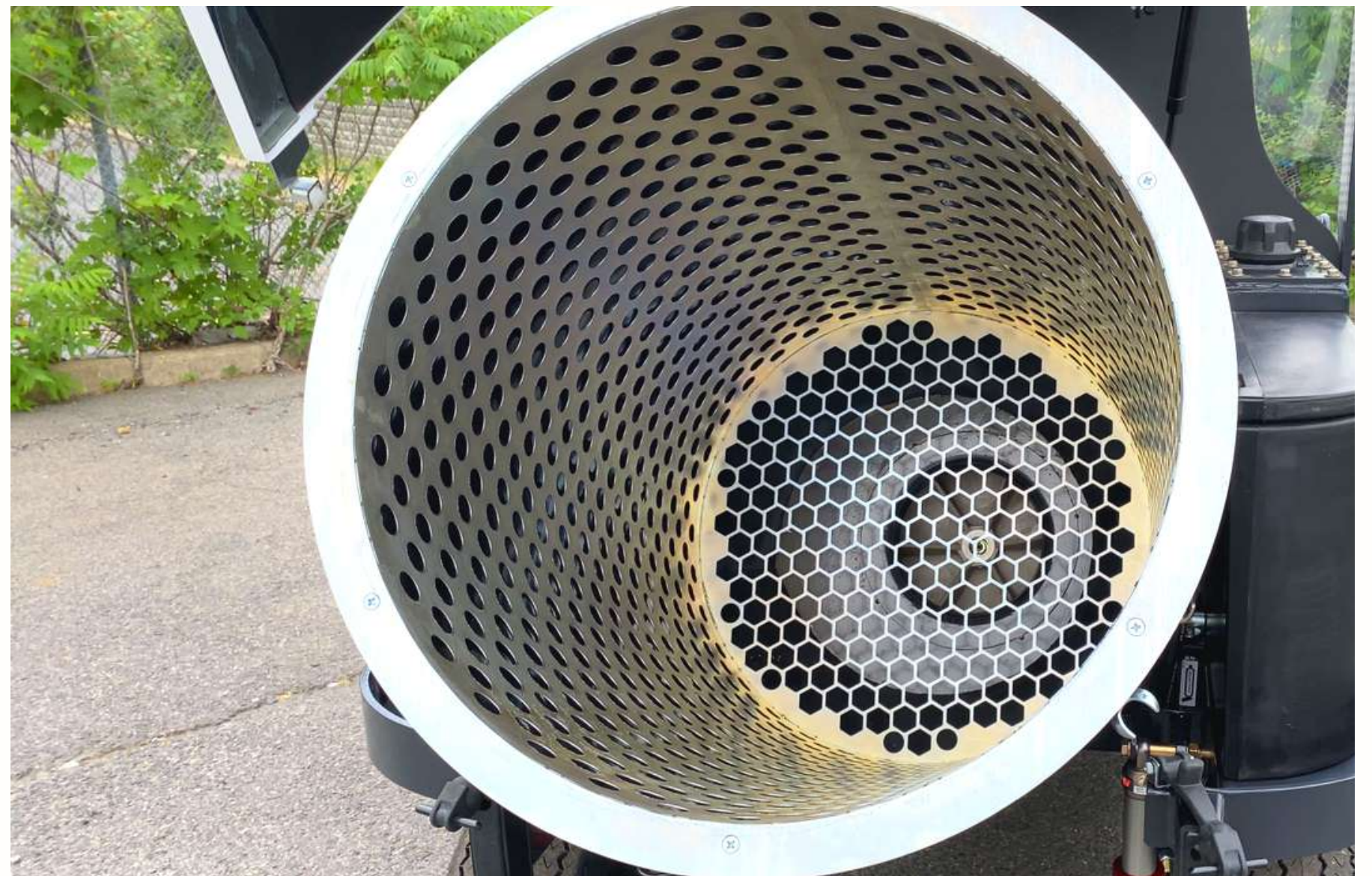




# Vacuum Fan and Suction System

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- 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 Hose

- 160-degree arm movement with 4 ft. (1220 mm) reach
- Diameter: 7 in. (178 mm)
- Right-side support for hose storage in transport mode







# Vacuum Hose Support Arm



Eliminates potential for workers' compensation claims





# Mirrors

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2 convex mirrors  
mounted on  
vacuum arm with  
340-degree rear  
visibility





# Vacuum Arm Handle



Controls for effortless  
up / down displacement  
of the boom





# 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

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

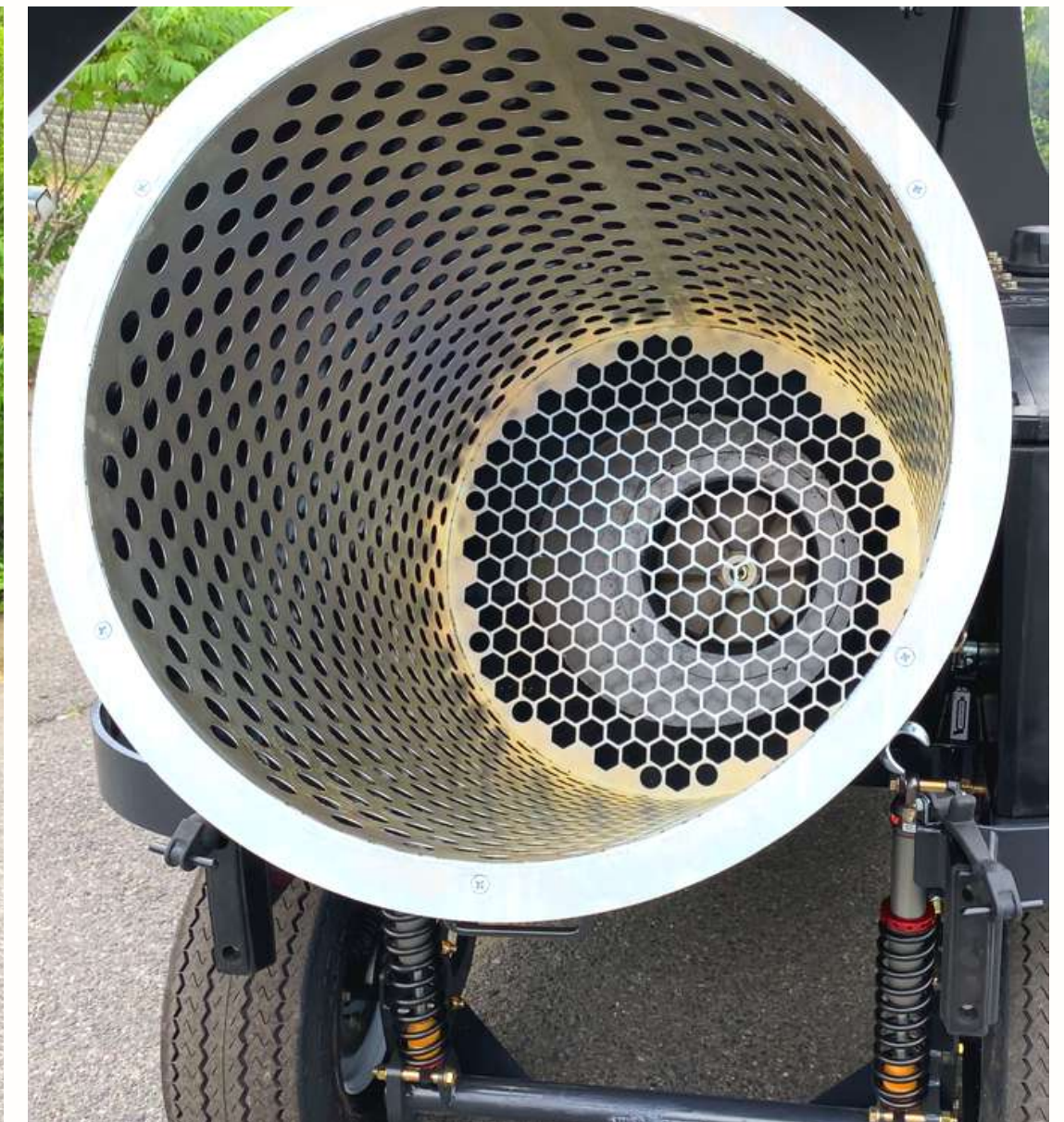






# Litter Container and Bag

- 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

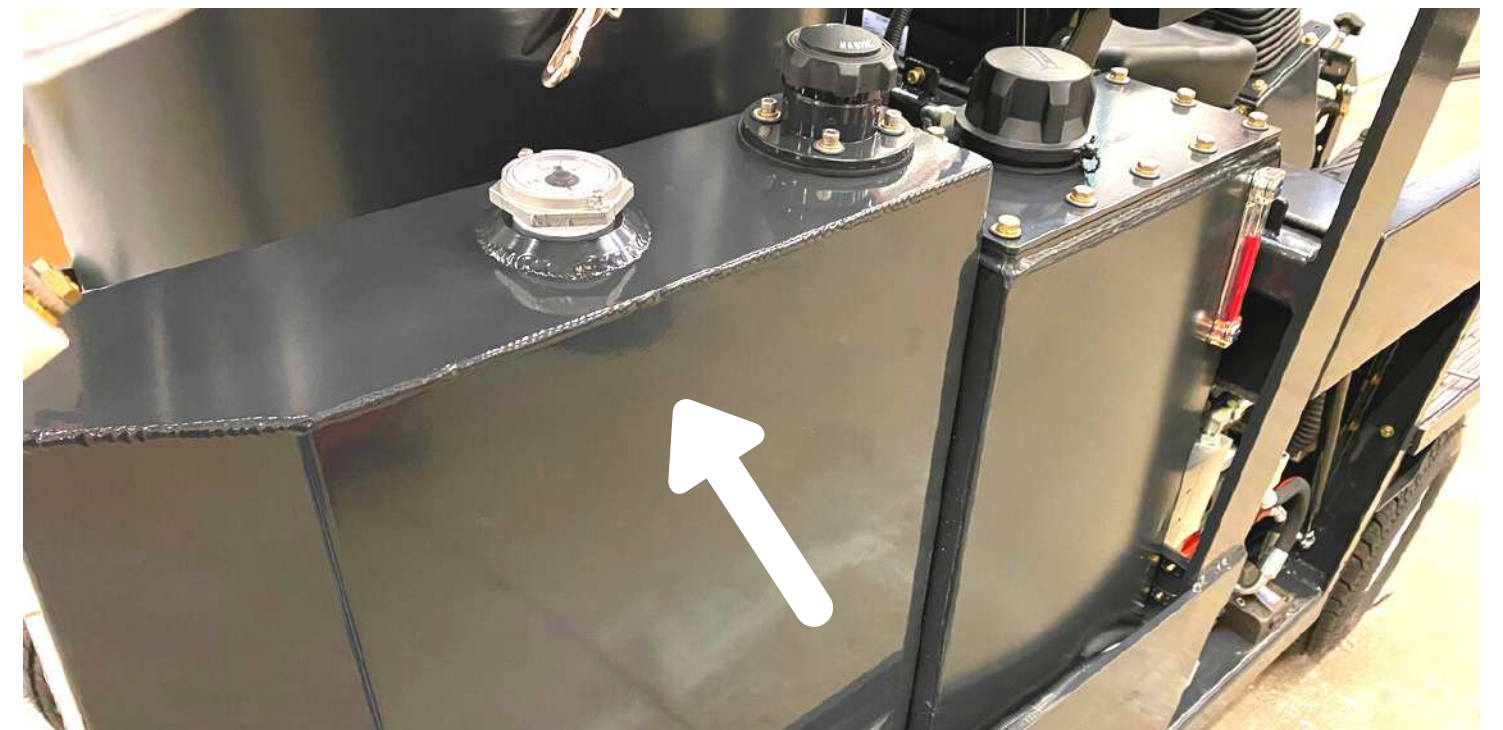
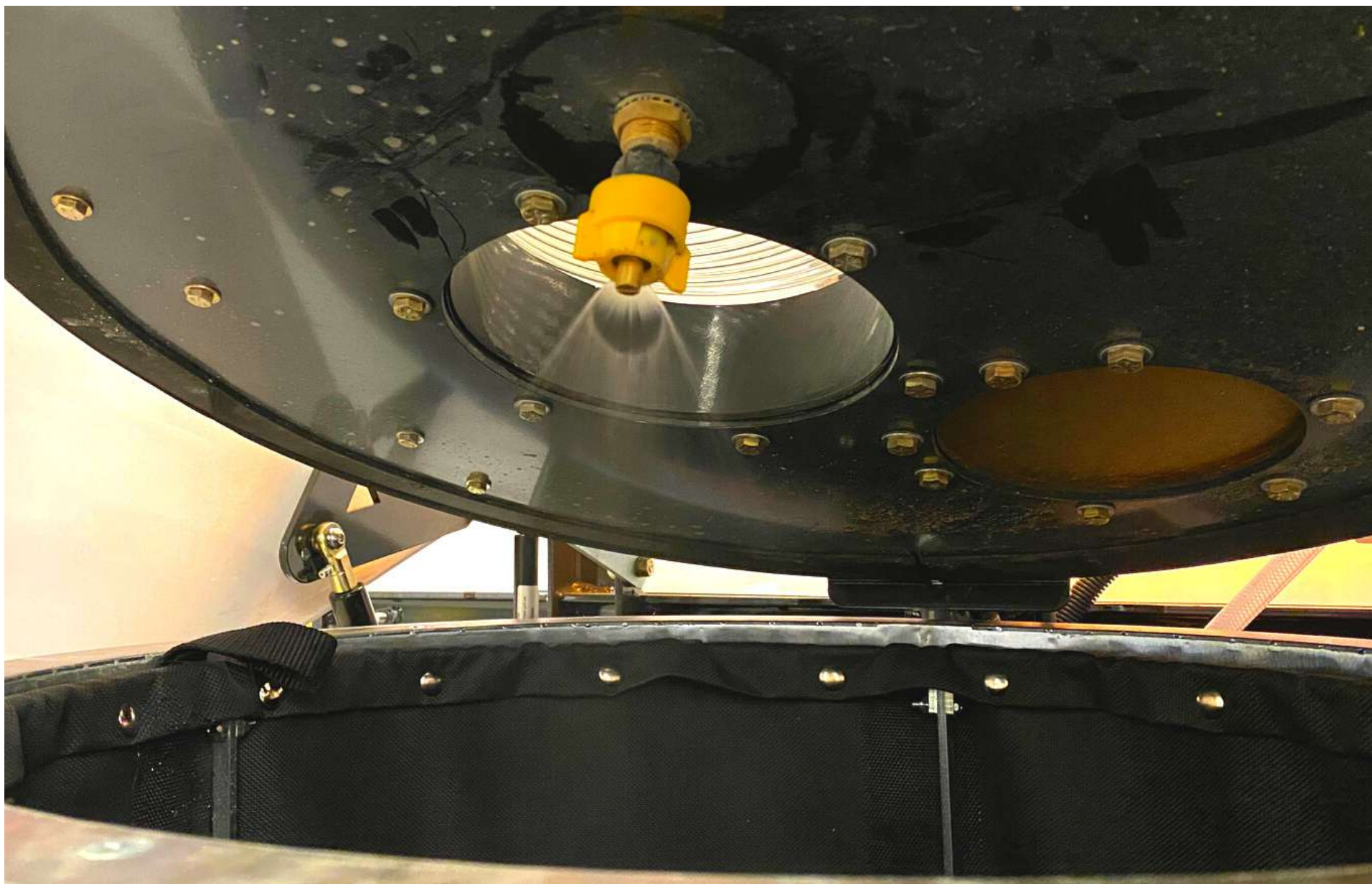


Exhaust bag captures dust particles that can escape from the minute holes of the special Madvac collector bags or Kevlar bin





## 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





# 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  
optional water mist system



License plate holder





# Convenience

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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 LN50 electric all-terrain litter vacuum:



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



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



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