

## LYNX 2000 Electric







72.5 kWh Battery Pack



18.5 kW LS Pump Drive Motor



55 kW Traction Drive Motor



11.5 kW Suction Fan Motor

#### Compact cleaning solution for 21st century cities

As cities evolve, so must our maintenance strategies. Introducing the LYNX 2000, a compact cleaning solution tailored to tackle the demands of 21st century urban environments. With cities expanding rapidly and infrastructure becoming more complex, the role of city maintenance workers is both increasingly difficult and essential. The LYNX 2000 addresses these needs. Offered in both diesel and electric models, it is equipped to handle future challenges.



### Technical Specifications

#### **Dimensions & Weight**

• Length (without brushes): 4,123 mm

Length (2 brushes): 4,573 mm
Length (3 brushes): 5,233 mm

• Width: 1,315 mm

• Height (without rotating light): 1995 mm

• Height (with rotating light): 2,051 mm

• Clearance: 194 mm

• Range of suspension lifting/lowering: ±50 mm from central position

• Wheelbase: 1,791 mm

• Track width: 1,075 mm

• Empty vehicle weight: 3,300 kg

• Gross vehicle weight (GVW): 4,500 kg (optional

5,000 kg)

#### **Battery & Drive Motor**

• Capacity (energy): 72.5 kWh

Rated voltage: 345.6 VMaximum voltage: 400 V

• Battery Weight: 550 kg / 1,212 lbs

Maximum current: 220 ADrive power enabled: 55 kW

• Maximum torque: 304 Nm / 224 lbf

• **Drive type:** Electric motor mounted on the rear axle

• **Drive control system:** Control of the drive motor via a separate inverter (drive inverter); the inverter and

drive motor are cooled by coolant

• Drive execution: 4WD - 4-wheel drive

Maximum gradeability: 25%

Maximum transport speed: 50 km/h

• Maximum working speed: 12 km/h – 7 mph

 Safety system when hopper is raised: If driving over 5 km/h (3 mph) with the hopper raised, the vehicle emits sound and visual warnings to the driver

 Cooling system: Cooling with coolant and combined cooler, HVAC system condenser separated from the combined cooler

#### Noise Level

LPA according to ISO 6394:2008-03 (workplace noise level): 64 dB (A)

LWA according to EN ISO 3744:2010, Directive 2000/14/EC: 95 dB









#### **Chassis & Suspension**

- Drive type (front/rear): Axle
- Chassis type: One-piece rigid chassis, welded
- frame of fine-grained steel
- **Vehicle steering:** (4WS optional)
- Front axle control: Hydraulic
- Rear axle control: Electro-hydraulic, automatic
- shutdown of 4WS when switching from
- working mode to transport mode
- **Differential type:** Limited slip differential, up to 40% torque
- Dynamic load capacity of the front axle:
- 3,500 kg
- Dynamic load capacity of the rear axle:
- 3,500 kg
- Front axle turn angle: 48°
- Rear axle turn angle: 24°
- 4WS wall-to-wall turning circle radius
- **(2 brushes):** 3,450 mm / 136"

- 4WS curb-to-curb turning circle radius
- **(2 brushes):** 2,425 mm
- Dimensions of front tires: 225/70 R15
- Dimensions of rear tires: 225/70 R15
- Front suspension type: Hydro-pneumatic
- suspension with transverse stabilization
- Rear suspension type: Hydro-pneumatic
- suspension with transverse stabilization
- Suspension control: Automatic suspension height control, independent front and rear suspension height control, two different ride heights selectable up to maximum driving speed, any ride height selectable up to 5km/h driving speed
- Suspension Height: In the highest suspension position, the vehicle can climb a 150 mm (6") curb
- Rear Hook (optional): Orlandi rear hook, installation of electrical socket possible

#### **Electrical system**

- Voltage: 12 V
- Battery capacity: 40 Ah
- Control system execution: CAN bus
- Software upgradeability: Software for all subsystems upgradeable from a single point on the vehicle
- **High voltage junction box:** Located on the chassis immediately at the exit of the battery
- Air conditioning compressor: High voltage air compressor 34 cc/rev

- Cabin water heater: Maximum heating power 5 kW
- Onboard charger: Maximum charging power 22 kW
- Hydraulic pump drive motor: Synchronous motor with permanent magnets, cooled by coolant, driven by a separate frequency converter
- Nominal power of the hydraulic pump electric motor: 18.5 kW

#### **Hydraulic System**

- Hydraulic oil tank capacity: 40 L
- Hydraulic Pump Type: Variable displacement axial piston pump, LS pump control for all consumers of working hydraulics, hydropneumatic suspension and rear axle turning system
- Hydraulic Pump volume: 25 cc/rev
- Oil filtration and oil level measurement: Builtin suction return filter, built-in pressure filter, oil level measurement with electronic detection of oil level minimum
- Oil Cooling System: Combined cooler



#### **Sweeping System**

- Brush diameter (two brushes): 850 mm
- Brush rotation speed: 0-125 rpm
- Minimal sweeping width: 1,400 mm
- Optimal sweeping width: 2,520 mm
- Maximal sweeping width (two brushes): 2,860 mm
- **Brush suspension:** Independent suspension
- **Brush ground pressure relief:** Independent ground pressure relief
- **Brush position control:** Independent left-right, updown position control, synchronous left-right brush position control (optional)
- Impact protection: Direct impact protection from the front - spring inside the brush arm, lateral impact protection - shock valves integrated into the hydraulic system
- Hopper unloading height: 1,550 mm / 61"
- Hopper unloading angle: 44°
- Hopper material: Aluminum, Stainless Steel (optional)
- **Hopper door opening:** Hydraulic
- Monitoring and washing hatches: 2 hatches one on each side of the hopper, to inspect and wash inaccessible hopper compartments
- Rear hopper bumpers: Covering the entire way up to the hopper unloading height
- **Rear step:** The vehicle is equipped with a rear folding step for easy inspection of the hopper interior
- **Bearings:** Self-lubricating bearings (maintenance free) wherever feasible

- Suction mouth width: 820 mm
- Suction mouth suspension: Independent suspension of suction mouth, with anti-vibration elements and parallelogram levers that provide parallel lifting and lowering of the suction mouth
- Suction mouth flap: The suction mouth is equipped with a front flap, with the possibility of hydraulic opening and closing
- Suction mouth wheels: 3 wheels, all swiveling
- Main suction hose diameter: 225 mm
- Closing of main suction hose: Main suction hose can be closed by electronic control from the cabin (in case of operation with wander hose)
- Suction fan speed: 3,500 rpm
- Suction fan airflow: 9,000 m³/h
- Suction fan pressure difference: 4,500 Pa
- Suction fan power: 11.5 kW / 15 HP
- **Suction fan drive engine:** Synchronous motor with permanent magnets, cooled by coolant, driven by a separate frequency converter
- **Suction fan exhaust direction:** Toward the rear side of the vehicle
- Suction fan cleaning / washing: The suction fan can be connected to the water supply system for cleaning and washing. The connection can be executed from the outside of the vehicle without the need to lift the hopper. The fan can be connected to the fresh water system of the vehicle

#### Third Brush System (optional)

- Third brush diameter: 850 mm
- Third weed brush diameter: 700 mm
- Max. sweeping width with three brushes: 3,100 mm
- Installation of third brush: Quick attachment
- Preparation for installation of third brush: The vehicle can be prepared in production for subsequent installation of the third brush

#### Wander hose (optional)

- Wander Hose Position: On the roof of the hopper
- Wander Hose Diameter: 150 mm
- Wander Hose Length: 4,000 mm





#### **Water System**

- Fresh water tank volume: 230 L
- Fresh water tank placement: Lateral and rear
- Fresh water tank filling: On the driver's side of the sweeper
- Fresh water level measurement: Absolute measurement of fresh water level
- Water recirculation system type: Separate recirculating water tank, with pressurized stream
- Recirculation water tank volume: 170 L
- Recommended volume of recirculation water available in the hopper: 150 L meter is installed on the side of the vehicle with an indication of the recommended volume of recirculating water in the hopper Recirculation water level measurement: Discrete measurement of recirculation water level (minimum and maximum)
- Recirculation water pump drive: Hydraulic
- Recirculation water emptying: Controlled from the cabin, large opening at the bottom of the recirculation tank Recirculation water nozzles: Points of recirculating water injection can be chosen - either only downstream of suction hose, or down and upstream of suction hose

- Fresh water pump drive: Electric
- Max. fresh water pump pressure: 4.2 bar
- Max. fresh water pump flow: 6 L/min
- Fresh water nozzles: 2 pcs. per brush, nozzle tilt and orientation control, cleanable coarse filter in front of nozzles
- Control of fresh water distribution on front brush nozzles: Possible to spray either on both brushes, only on the right brush, on the third brush and both brushes simultaneously, or to shut down spraying entirely
- Functionality of auxiliary valve and fresh water connection at the rear of the vehicle: Possibility of pumping water from the fresh water tank to the recirculation tank, possibility of connecting a watering hose, possibility of connecting a hose for washing the suction fan, possibility of connecting a short hose for washing hands, possibility of connecting a hose for priming the mini wash pump in case of a long period without water in the tank (winter period), possibility of connection and supply of fresh water to the wander hose
- Max. flow of recirculation water pump: 60 L/min

#### **Manual High-Pressure Washer (optional)**

- Washer pump drive: Hydraulic Washer pump max. pressure: 140 bar
- Washer pump max. flow: 11 L/min
- Hose length: 15 m

- Hose storage method: Automatic hose reel integrated into the vehicle (not placed on the front side)
- Washer nozzles: Two types (wide and narrow), selected by rotating the washer gun

#### **Tracking & Safety**

• ARMS tracking and diagnostic system: Subscription for 12, 24, 36 or 48 months (optional)







- Cabin construction: Steel welded frame
- **Sound insulation:** The cabin is soundproofed with a foam profiled insulator
- Front windshield: Laminated glass, low reflection index, heat reflective (tinted), no front cross profile, no classic front dashboard, heated (optional)
- **Doors:** Tempered glass, sliding windows, low reflection index, heat reflective (tinted)
- **Side windows:** Laminated glass, low reflection index, heat reflective (tinted)
- Floor window: Tempered transparent glass
- **Cabin suspension:** Comfortable anti-vibration elements Windshield wiper: Wiper with settings for
- intermittent or continuous wiping, with
- windshield washing capability Driver seat mechanical: Mechanical
- suspension seat, depth and height adjustable,
- adjustable seat back angle, adjustable
- headrest height, 3-point safety belt
- Driver seat pneumatic (optional): Pneumatic suspension seat, depth and height adjustable, adjustable seat back angle, adjustable headrest height, 3-point safety belt
- Passenger seat mechanical: Mechanical suspension seat, depth and height adjustable, adjustable seat back angle, adjustable headrest height, 3-point safety belt
- Passenger seat pneumatic (optional): Pneumatic suspension seat, depth and Height adjustable, adjustable seat back angle, adjustable headrest height, 3-point safety belt
- Full-sized passenger seat: Yes
- Steering column: Adjustable steering column (2 adjustment angles, steering wheel height adjustment), compact steering column design allows better visibility of work tools, steering wheel levers to control vehicle functions using CAN Bus technology
- Reversing camera (optional): Reversing camera, camera feed displays automatically on the main screen when the vehicle reverses
- Suction mouth camera (optional): Camera on the suction mouth, screen for camera feed mounted on the steering column for excellent visibility

- **360° camera (optional):** Provides a 360° bird'seye view of the immediate vicinity of the vehicle, including all blind spots
- Control of main sweeping functions: On the right or left console, depending on the vehicle version (LHT or RHT), console attached to the right or left cab door, control units resistant to dirt, water and mechanical damage
- Control of auxiliary sweeping and vehicle functions: On the roof console, control units resistant to dirt, water and mechanical damage
- Execution of main and auxiliary sweeping functions control units (I/O): All control units implemented using CAN Bus technology
- Heating and air conditioning: HVAC system with automatic control, possibility to switch off outside air circulation in the cabin, built-in external dust filter, built-in dust filter inside the cabin for air recirculation, 4 diffusers for the front windshield for quick defogging and defrosting, 2 diffusers on the inner side of the cabin roof for maximum cooling effect and defogging side windows (improves visibility of rear view mirrors), 2 diffusers in the lower side sections for better defogging of the lower side windows (improves visibility of working tools), 2 central diffusers for better heating effect and better defogging of the floor window (improves view of the suction mouth), automatic air conditioning
- Rear view mirrors: Combined rear view mirror -R1200 & R300 for better coverage of blind spots, adjustable rear view mirror angle, heating (optional), heated panoramic mirrors with or without electric adjustment and additional mirror for front brushes (optional)
- Main screen: Size 7", PCAP capacitive touch screen, 16 million colors, built-in USB socket next to the screen for easy connection, 1000 nit backlight, anti glare coating
- Radio: Radio with MP3 and USB connectivity, DAB + Bluetooth connectivity (optional),
- Stereo speaker system on the sides of the roof
- Fire extinguisher (optional): 1 kg / 2.2 lbs. of powder, inside the cab can be reached from the driver's seat
- First aid kit (optional): Behind the driver's seat
- Toolbox (optional): In front of the co-driver's seat



#### **Cabin & Comfort (Continuation)**

- Cabin design regarding sun protection: The forward tilt of the windshield and the extended roof protects the operator from direct sunlight
- Auxiliary storage compartments: Cabin roof storage compartment, side console compartments, bottle and small item storage compartment, storage net on the rear cabin wall, document tray at the back of the seatback
- Hopper lifting / lowering: Control is possible with the cabin door open or through the side window of the cabin
- One key system: The same key is used to open the doors of the cabin and the fuel tank plug

#### Lights

High beam: Halogen (LED optional)Low beam: Halogen (LED optional)

• Day light: LED

• Front parking light: LED

• Turn indicators (front, side, rear): LED

Rear parking light: LED

• Rear fog light: LED

Rear brake light: LEDReversing light: LED

• Front work lights (optional): LED

• Rear work lights (optional): LED

• Suction mouth work light (optional): LED

• Light wiring: According to ECE R 48

#### **Surface Protection**

• Color of the sweeper according to the customer request: Changing the color of the vehicle's white side surfaces or the sweeper's roof color (optional)

#### **Cer tificates**

• PM emissions: 4 stars PM 2,5 / PM 10 test according to EN ISO 15429-3











# LYNX



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