

Risk assessment – Using a Pudu SH1



STEP 1 – ASSESSMENT DETAILS

Method Statement Reference:	CCRM-084	FREQUENCY (TICK AS APPROPRIATE)				
Issue Number	01	Daily	Weekly	Monthly	Quarterly	Ad Hoc
Task:	Using a Pudu SH1					
Date Completed:	24 September 2025	✓				
Employee consultation and involvement:	Dina Oliveira					
Re-Assessment Due*:	One year from the above date					
Method Statement Completed By:	Health & Safety Manager	Emergency Telephone Number:				
		020 7624 6330 / 111 / 999				

STEP 2 – PERSONNEL REQUIRED (DURING ACTIVITY)

Lone Worker	2 or More Persons	First Aider	Supervisor/Team Leader	Management
✓			✓	

STEP 3 – PROCEDURES TO BE CARRIED OUT (BEFORE STARTING WORK)

Read the appliance's user manual	Training and Knowledge Company safety Site -induction form: F039	Perform a Visual safety check of the equipment	Assess the footfall of the area	Fit Other safety control implemented by us or the client	Check for visual damage	Place Warning Signs	Surface preparation/ remove loose items	Check the machine is charged for use	Check the area to be cleaned for obstacles
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

STEP 4 – HAZARDS, PRODUCT AND PPE

Slips, Trips & Falls	Electric Shock	Fire Risk	Manual Handling	Harmful/Irritant	Eye Protection	Rubber Gloves	Sensible Work Shoes
							
✓	✓	✓	✓				✓

STEP 5 – PRODUCT USAGE - **DO NOT USE CHEMICALS INSIDE THE ROBOT**

Product Name	Product Usage	Product Type	Usage Dilution	Application / Equipment
NA	NA	NA	NA	Pudu SH1



STEP 6 – METHOD STATEMENT

SAFETY	METHOD	CARE OF EQUIPMENT
1. Untrained operatives operating the device are prohibited. 2. Put warning signs before commencing the task 3. Work to be undertaken only after visual safety check has been carried out 4. Do not rest the device body against other objects or walls when the device is in working position, after the task is finished, adjust the device to the store position and store it on a flat ground. 5. Clean up any large particles of rubbish on the ground before use to <u>avoid motor overload.</u> 6. Device can only be used on indoor and outdoor flat ground, avoiding bumpy surfaces such as steps. 7. Do not add flammable, strong acid or alkaline detergents that may be harmful to the device or personnel to the solution tank. 8. Do not use the robot at a temperature above 40°C or below 1°C. 9. Keep away from flammable dust, liquid, or vapor when operating the device. 10. Do not leave the device on ramps or slopes as the device may flip. Leave the device on a flat, hard surface 11. Do not push the robot backward when the power is on. 12. Do not expose the charger to rain; 13. Do not use Pudu SH1 on electrical sockets on the floor to avoid electric shocks; 14. Do not climb over Pudu SH1 15. Do not use/leave Pudu SH1 on stairs or work platforms; 16. Do not use the robot in a humid environment or on surfaces covered with fluid or gooey stuff 17. Remove objects from the floor that could be accidentally pushed by the rotation of the brushes; keep hands and feet away from the rotation of the brushes; 18. Never wash the machine with direct or pressurized jets of water or with corrosive substances 19. Do not use flammable materials in the water tank 20. Do not use the charger if it is wet 21. Always charge the robot <u>in a ventilated area</u>, where the <u>temperature does not exceed 30 °C</u> 22. Inspect area of work and access 23. Put away any wire or other objects on the ground to prevent the robot from being tripped or entangled. 24. Look for any new warnings 25. Watch out for leakage and slip hazards- Report it if you see it as well as leaving a do not use sign. 26. Do not try and lift robot. 27. Use WATER-BASED FIRE EXTINGUISHERS to put out the flames, and then use large quantities of water to cool down the accidental battery to prevent re-ignition. 28. When operating the device, do not wear ties, scarves, or any accessories that could be entangled by the rotating parts. 29. Avoid touching any moving or rotating parts when device is working to prevent injuries. Known Hazards 30. Risk of Fire 31. Risk of electric shocks 32. Dangerous Atmospheres for battery charging 33. Unprepared roadways or unsurfaced roads 34. Cuts and manual handling injuries when changing pads, pad drives, squeegees, etc. 35. Appliance tipping due to un-even floors 36. Collision with people walking past 37. Creating slip hazards if faulty	METHOD 1. Make sure Work area is clear for safe access and operation 2. Do not try and move robot manually 3. Inspect the access way route for the robot and remove loose items such as clothing or large items of rubbish. 4. Carry on the visual safety check as instructed on the H&S training and induction program 5. Place cleaning signs if the robot is leaving damp floors 6. Before cleaning the robot, put gloves on 7. If you have been trained to do so <u>follow the maintenance guide and your training</u> to clean the robot 8. Look out for faults with the robot such as leakage or an electrical smell.- Report to your line manager if you notice an abnormality immediately.	1. Only attempt maintenance of the Pudu SH1 if you have been fully trained to do so. 2. Do not clean or maintain the device when it is powered on and working. 3. Check the device before use. 4. Do not replace the disc brush and squeegee when the device is working. 5. Do not use any water pressure cleaner to clean the device directly. 6. Do not immerse the equipment in water After Every Use • Wipe the scrubber body with a clean dampened cloth. Do not use corrosive cleaning agents when wiping, it is recommended to use neutral cleaning agents or water • Charge in time when the battery is low • Remove the disc brush for cleaning after each use • If the disc brush is worn out, please replace with new disc brushes • Remove the squeegee for cleaning after each use • If the Squeegee is worn, broken, or deformed, which affects the water-absorbing effect, it is necessary to replace the strip with a new one



Monitoring and Reporting

- A visual check is to be completed every day before starting Machine. Use the machine ONLY IF the visual safety check is satisfactory.
- If abnormality or fault (s) are found, **place signage and report to your line manager**
- Reporting of any irregularity through e-mail along with phone call to head office and Supervisor/area manager

Plant and equipment

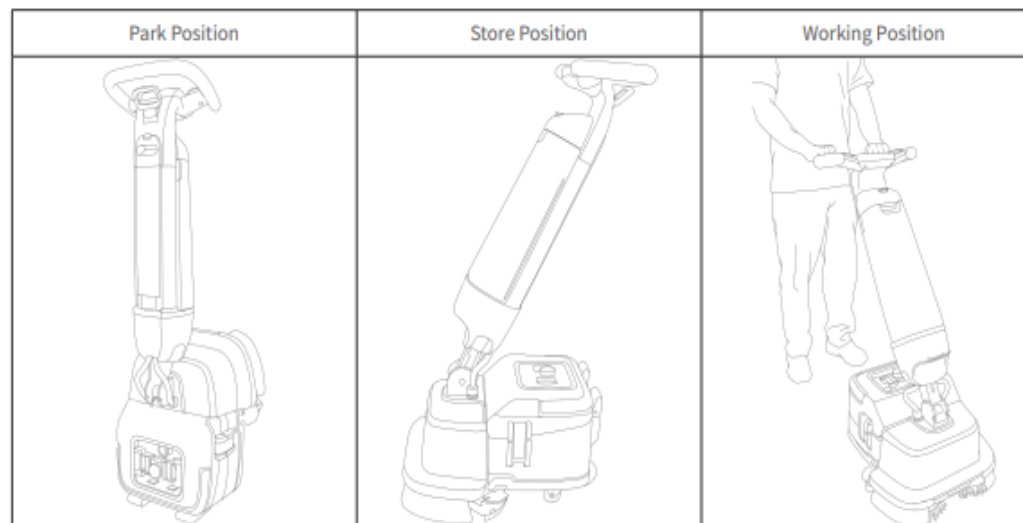
- Professional miniature upright scrub and dry cleaner

Battery Charging & safety information

- Do not charge your robot using non-original chargers. If the charger is damaged, replace it
- In case of battery failure, remove the battery immediately and inform your line manager
- The machine and batteries should be stored at a temperature of -20° to 65° C and the relative humidity should be less than or equal to 40° C (93±3) %RH.
- Do not charge nearby flammable and explosive objects.
- Do not heat or burn the battery and charger.
- Ensure that the battery and charger are away from water and keep hands dry in operations.
- Do not compress, penetrate, or hit the charger to avoid battery damage.

SUPPORTING IMAGES – Spec

Specifications	Description		
Product dimensions (L x W x H)	Vertical State	49 x 53 x 120 cm	19.29*20.87*47.24 inches
	Store Position	49 x 35 x 127 cm	19.29*13.78*50.00 inches
Product weight	27 kg		59.52 pounds
Operating voltage	DC 22-29.4 V		
Power input	AC 100V-240V,50/60Hz		
Power output	29.4V, 8A		
Battery capacity	18 Ah		
Battery Life	2.5 h		
Operation time of batteries	Normal Mode: 70 mins		
	ECO Mode: 100 mins		
Rated power	380 W		
Brush speed	350 rpm		
Productivity	1100 - 1600 m²/h		11840-17222 ft²/h
Working width	44 cm		17.32 inches
Squeegee width	49 cm		19.29 inches
Solution tank capacity	4 L		1.06 Gal
Recovery tank capacity	4 L		1.06 Gal
Noise level (SPL)	Normal Mode: 76 dB (A)		
	ECO Mode: 71 dB (A)		
Wi-Fi	2.4G Wi-Fi: 19.83 dBm		
Charge on the machine	Yes		
Intelligent functions	Touch screen, liquid level detection, WiFi, APP		
IP rating	IPX4		





STEP 7 – RISK ASSESSMENT (Likelihood X Severity = Risk)

CATEGORY	HAZARD	POTENTIAL HARM	LIKELIHOOD	Severity	Risk Before Controls	Risk After Controls	COMMENTS
Operation of equipment	Fire, / Shortcut /electric shocks	Burns, shock,	2	5	10	5	• Employees are trained on the safe used of the Pudu SH1 • Weekly electrical safety inspection in place and documented by site supervisor and annually by area manager • Visual inspection is in place before the operation • Supervision is in place before and during the operation • Reporting procedures are in place. • Thermal protection is in place • Operators are aware not to charge close to metal objects • User needs to read and understand the user manual • An operative without training cannot touch the Robot • Self-charging- Employees do not have to plug in the robot manually
Machine preparation / operation	Slip, trips and falls due to uneven or slippery surfaces or obstacles on the floor	Back injury /bruises/cuts Machinery damage	3	4	12	4	• Visual check of the area • Competent supervision of the robot is in place • Employees cleaning the robot must follow the manual and be trained • Reporting in place to watch for leakage from the machine • Communication with the building management for the storage area arrangements • Good housekeeping for the machinery storage area
Manual Handling	Heavy objects/bending	Back injuries	3	3	9	3	• Staff are to avoid manually moving the robot. • Robot is programmed to move via phone app • Staff training • Toolbox programme • Component supervision • Site induction
Battery charging	Accidental short circuit, overcharging, submerge in water	Burns, fire, shocks Damage to property	2	5	10	5	• Only trained operatives allow to use the machinery • Operatives are not allowed to dismount battery or compartments • Robot cannot be charged or handled near sources of heat, flames or sparks • Robot has smart technology to stop overcharging • Visual check before commencing in place • Operatives trained and instructed on the use of electric equipment • Toolbox program in place • Supervision and reporting of incidents • Original charger • Not to charge close to metal objects or liquids • Self-charging in dock

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Manual handling moving parts	Contact with moving parts and locks when operating the machine and cleaning the machine	Crushing, shearing, cutting entanglement, impact,	2	2	4	2	• Induction and training in place • Manual handling toolbox • Staff trained on the Reporting of dangerous occurrences and accidents • Staff are aware they aren't allowed to move the robot themselves and can only report to the Supervisor / Area manager • Employees trained to move the robot have been trained on correct manual handling techniques
Collision with the robot	Direct contact with robot	Risk of falling over and injuring themselves	3	3	9	3	• Robot has built-in sensors • Robot used in open spaces and is easy to see • Robot used in the evening when the building is almost empty (After working hours)
OVERALL RISK RATING BEFORE CONTROL: 9.0			Very Low	Low	Medium	High	
					✓		
			Very Low	Low	Medium	High	
			✓				
OVERALL RISK RATING AFTER CONTROL: 3.7							
LIKELIHOOD 1. IMPROBABLE OCCURRENCE 2. REMOTED OCCURRENCE 3. REASONABLY PROBABLE OCCURRENCE 4. VERY LIKELY OCCURRENCE 5. ALMOST CERTAIN OCCURRENCE		SEVERITY 1. SLIGHT: NO INJURY or Injury requiring first Aid treatment 2. MINOR: INJURY requiring medical treatment with absence from 3 days to 3 weeks 3. MODERATE: Injury illnesses resulting in temporary disability (eg. fractures) and absence over 3 weeks 4. SERIOUS: Severe injury or permanent disability (e.g loss of limb, sight) property and equipment damage 5. MAJOR: Immediate danger exist, capable of causing death, loss or damage on a wide scale and serious business disruption (e.g. Explosion, fire, structural damage, etc.)					INTERPRETATION 4 and below very Low risk = No further action, but ensure controls are maintained an review 5 to 8 Low risk = Risk Can be tolerated or for only short term. Plan introduction of measures with a define time period 9 to 15 Medium Risk = Planned and introduce further control measures to mitigate the risk within a time scale 16 and Above = Stop activity and immediate action